

2/11/95
9/10/1994

PERMIT
FOR THE INVESTIGATION AND REMEDIATION OF RELEASES
FROM SOLID WASTE MANAGEMENT UNITS

Washington State
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504-8711
Telephone: (206) 459-6000

United States
Environmental Protection Agency
1200 Sixth Avenue, HW-112
Seattle, Washington 98101
Telephone: (206) 553-1253

FILE COPY

Issued in accordance with the applicable provisions of the Hazardous Waste Management Act, Chapter 70.105 RCW, and the regulations promulgated thereunder in Chapter 173-303 WAC and the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), and the regulations promulgated thereunder in Title 40 of the Code of Federal Regulations.

ISSUED TO:

Facility Operator
Burlington Environmental Inc.
Pier 91 Facility
200~~2~~ West Garfield
Seattle, Washington xxxxx
Telephone: (206) xxx-xxxx

Property Owner
Port of Seattle
Terminal 91
P.O. Box 1209
Seattle, Washington 98111
Telephone: (206) xxx-xxxx

FOR: Pier 91 Facility, EPA Identification No. WAD 00081 2917

This Permit is effective as of February 10, 1995 and shall remain in effect until February 10, 2005 unless revoked and reissued in accordance with 40 CFR 270.41 or WAC 173-303-830(3) and (5), or terminated in accordance with 40 CFR 270.43 or WAC 173-303-830(3) and (5), or continued in accordance with 40 CFR 270.51 or WAC 173-303-806(7).

ISSUED BY: WASHINGTON DEPARTMENT OF ECOLOGY and the
U.S. ENVIRONMENTAL PROTECTION AGENCY - REGION 10

Jerry Lenssen, Section Head
Hazardous Waste Permits
Department of Ecology
Agency

Randall F. Smith, Director
Hazardous Waste Division
Environmental Protection

Date _____

USEPA RCRA



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INTRODUCTION

PERMITTEES: BURLINGTON ENVIRONMENTAL INC. and PORT OF SEATTLE
EPA/STATE IDENTIFICATION NUMBER: WAD 00081 2917

Pursuant to:

Chapter 70.105 RCW, the Hazardous Waste Management Act of 1976, as amended, and regulations codified in Washington Administrative Code (WAC) 173-303,

Solid Waste Disposal Act (42 U.S.C. 3251 et seq.) as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), and,

Regulations promulgated by the U.S. Environmental Protection Agency (EPA) codified in Title 40 of the Code of Federal Regulation (40 CFR),

a Permit is issued to both Burlington Environmental Inc., the hazardous waste facility operator, and the Port of Seattle, the property owner (hereafter called the Permittees), to conduct corrective action at the Pier 91 facility. The Pier 91 facility is located at 2001 West Garfield, Seattle, Washington, XXXXX. at latitude xx degrees xx minutes xx seconds North and longitude xxx degrees xx minutes xx seconds West.

The Permittees must comply with all terms and conditions set forth in this Permit and in Attachments xx through xx. When there is a conflict between permit condition(s) and a permit attachment, the wording of the permit condition(s) prevails. The Permittees must also comply with all applicable State regulations, including Chapter 173-303 WAC and as specified in the Permit. Additionally, the Permittees must comply with all applicable federal regulations, including 40 CFR Parts 260 through 264, Part 266, Part 268, and Part 270.

Applicable state and federal regulations are those which are in effect on the date of final administrative action of this Permit and any self-implementing statutory provisions and related regulations which, according to the requirements of RCRA (as amended), or state law, are automatically applicable to the Permittees' corrective action activities, notwithstanding the conditions of this Permit.

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This Permit is based upon the administrative record, as required by 40 CFR xxxx and WAC 173-303-840. The Permittees' failure in the application or during the Permit issuance process to fully disclose all relevant facts, or the Permittees' misrepresentation of any relevant facts at any time, shall be grounds for the termination or modification of this Permit and/or initiation of an enforcement action, including criminal proceedings. The Permittees must inform the Director and the Administrator of any deviation from permit conditions or changes in the information on which the application is based which would affect either the Permittees' ability to comply or actual compliance with the applicable regulations or permit conditions or which alters any condition of this Permit in any way.

The Department shall enforce all conditions of this Permit for which the State of Washington is authorized and all conditions which are designated in this Permit as state requirements only. Any challenges of any Permit condition that concern State requirements, (i.e., conditions of this Permit for which the State of Washington received final authorization or conditions which are designated in the Permit as state requirements only) shall be appealed to the Department in accordance with WAC 173-303-845. In the event that the Department does not maintain final authorization, the Agency will enforce all Permit conditions except those which are State-only requirements.

The Agency shall enforce all permit conditions which are based on federal regulation promulgated under HSWA, but have not yet been adopted by the State of Washington and have not been included in the state's authorized program. In such capacity, the Agency shall enforce any permit condition based on state requirements if, in the Agency's judgement, the Department should fail to enforce that permit condition, except that in no case shall the Agency enforce any permit condition designated as a State requirement only.

In the event that the State of Washington receives authorization from EPA to implement additional regulations promulgated under RCRA, as amended, the Department shall assume enforcement responsibility for existing permit conditions that are based on these requirements.

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LIST OF ATTACHMENTS

The following listed documents are hereby incorporated, in their entirety, by reference into this Permit. These incorporated attachments are enforceable conditions of this Permit, as modified by any specific permit condition.

Attachment AA	Physical description of the Pier 91 corrective action facility.
Attachment BB	Modifications to BEI draft RCRA Facility Investigation Report.

"NN" = New attachment for Stabil. Measure Q15.
give attachment a date
& page @ reference
to help w/ modification

✓ Border Plate ✓ Enforcement

attach guidelines but exclude portion

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DEFINITIONS

All definitions contained in 40 CFR Sections 124.2, 260.10, 270.2, 264.141, and WAC 173-303-040 are hereby incorporated, in their entirety, by reference into this Permit. Any of the definitions used below, (a) through (k), shall supersede any definition of the same term given in 40 CFR Sections 124.2, 260.10, 270.2, 264.141, and WAC 173-303-040. Where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

For purposes of this joint Permit, the following definitions shall apply:

- a. The term "Permit" shall mean the joint corrective action permit issued by the Washington State Department of Ecology, pursuant to Chapter 70.105 RCW and Chapter 173-303 WAC, and by the Environmental Protection Agency, Region 10, pursuant to 42 U.S.C. 3251 et seq. and 40 CFR Parts 124 and 270.
- b. The term "Director" shall mean the Director of the Washington State Department of Ecology or a designated representative. The Section Head (with the address as specified on page one of this Permit) is a duly authorized and designated representative of the Director for purposes of this Permit.
- c. The term "Administrator" shall mean the Administrator of the U.S. Environmental Protection Agency (EPA) or a designated representative. The Director, Hazardous Waste Division, EPA Region 10, (with the address as specified on page one of this Permit), is a duly authorized and designated representative of the Administrator for purposes of this Permit.
- d. The term "Department" shall mean the Washington State Department of Ecology, (with the address as specified on page one of this Permit).
- e. The term "Agency" shall mean the U.S. Environmental Protection Agency, Region 10, (with the address as specified on page one of this Permit).

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DEFINITIONS (CONTINUED)

- f. The terms **"facility"** or **"site"** shall mean that identified in the physical description of the property. This property description is as set forth in Attachment AA of this Permit and includes the hazardous waste storage and treatment facility and all contiguous property under the control of the operator and/or property owner.
- g. The term **"solid waste management unit"** shall mean any discernible unit at which solid waste has been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which hazardous waste or hazardous constituents (40 CFR Part 261, Appendix 8) have been routinely and systematically released.
- h. The term **"Area of Concern,"** shall mean a physical area or physical evidence of an area that poses some threat to human health and the environment from a release and does not otherwise meet the narrower definition of **"solid waste management unit."**
- i. The term **"RCRA Facility Assessment"** shall mean the October 17, 1994 final RCRA Facility Assessment for the Terminal 91 facility.
- j. The term **"RCRA Facility Investigation"** shall mean an investigation of releases of hazardous wastes and hazardous constituents from solid waste management units.
- k. The term **"release"** shall mean any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste or hazardous constituents.

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PART I - STANDARD CONDITIONS

I.A. Standard Permit Conditions: The Permittee shall comply with all applicable requirements of 40 CFR 270.30.

added additions

*{ monitor part added
equivalent method
criteria for judging }*

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PART II - GENERAL FACILITY CONDITIONS

II.A. The permit attachments, listed on Pages 5 and 6 of this permit, are incorporated by reference into this Permit.

II.B. Permit Modifications: Permit Modification will be done according to the three tiered modification system, 40 CFR 270.42 and WAC 173-303-830, and the preamble to the federal regulation (53FR37912, September 28, 1988). *State*

II.C. Severability *Ecology*

II.C.1. Effect of Invalidation: The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. Invalidation of any state or federal statutory or regulatory provision which forms the basis for any condition of this Permit does not affect the validity of any other state or federal statutory or regulatory basis for said condition.

II.C.2. Final Resolution: In the event that a condition of this Permit is stayed for any reason, the Permittees shall continue to comply with the related applicable and relevant interim status standards in 40 CFR 265 and WAC 173-303-400 until final resolution of the stayed condition unless the Administrator or Director determines compliance with the related applicable and relevant interim status standards would be technologically incompatible with compliance with other conditions of this Permit which have not been stayed.

II.D. Compliance Not Constituting Defense: Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3007, 3008, 3013, or 7003 of RCRA (42 U.S.C. Sections 6927, 6928, 6934 and 6973), Section 104 or 107, and 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA) as amended, or any other federal or state law governing protection of public health or the environment.

II.E. Permit Expiration and Continuation: This Permit and all conditions herein will remain in effect beyond the Permit's expiration date until final permit

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determination if the Permittee has submitted a timely, complete application (under WAC 173-303-806 and 40 CFR Section 270 Subpart B for HSWA provisions), and, through no fault of the Permittee, the Director or the Administrator have not made a final permit determination, through their respective authorities, as set forth in WAC 173-303-840 and 40 CFR 270.51 for HSWA provisions. This Permit may be reviewed 5 years after its effective date and modified, as necessary, in accordance with 40 CFR 270.41.

II.F. Reports, Notifications and Submissions: All reports, notifications or other submissions which are required by this Permit to be sent or given to the Director and/or the Administrator should be sent certified mail or given to:

Supervisor, Hazardous Waste Section
Department of Ecology
Northwest Regional Office
3190 160th Ave S.E.
Bellevue, Washington 98008-5452
Telephone: (206) 649-7000

Program Manager, Waste Management Branch
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, HW-102
Seattle, Washington 98101
Telephone: (206) 553-1253

These phone numbers and addresses may change without modification of the permit.

II.G. Documents To Be Maintained At Facility Site: Current copies of the following documents, as amended, revised, and modified, shall be maintained at the facility. These documents must be maintained until closure is complete and certified by an independent, registered professional engineer, unless a lesser time is specified in the Permit.

1. The Permit and all Attachments;
2. The facility operating record.

II.H. Waste Minimization

II.H.1. Waste Minimization Certification: In accordance with 40 CFR 264.73(b)(9), the Permittees must place a

*Accidental,
permit continuing*

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certification in the operating record on an annual basis that:

- a. A program is in place to reduce the volume and toxicity of hazardous waste generated to the degree determined by the Permittees to be economically practicable; and,
- b. The proposed method of treatment, storage or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

II.H.2. Biennial Report: In accordance with 40 CFR 264.75, the Permittees shall submit to the Regional Administrator, within one hundred and fifty (150) days of the effective date of the Permit and on March 1 of each even numbered year thereafter, a report documenting efforts to reduce the volume and toxicity of waste generated, including estimates of the reduction in volume or toxicity achieved since the previous report by the facility's waste minimization program certified in I.H.1.

II.I. Operating Record: The Permittees shall maintain a written operating record at the facility, consisting of records kept for the length of time specified below. The Permittees shall also record all information referenced in this Permit in the operating record within 48 hours of the information becoming available. The operating record shall include, but not be limited to, the information listed below:

- a. The following records shall be maintained until corrective action is complete and certified:
 - i. A map(s) showing the location of all solid waste management units and Areas of Concern at the facility;
 - ii. Assessment reports, as per WAC 173-303-360(2)(k), of all incidents that require implementation of the contingency plan;
 - iii. Record of spills and releases;
 - iv. Written reports and records of verbal notification to the Director and the

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Administrator to address releases, fires, and explosions;

- v. Generator reports submitted in compliance with WAC 173-303-220(1);
 - vi. Summaries of all records of corrective action;
 - vii. Copies of all other environmental permits;
 - viii. Corrective action deed notification;
 - ix. Certifications pursuant to 40 CFR 264.73(b)(9), Annual Waste Reduction Plan.
- b. The following records shall be maintained for a minimum of 5 years. This time period may be extended by the Department or Agency in the event of enforcement action:
- i. Facility operation and maintenance records and reports prepared pursuant to this Permit;
 - ii. Progress reports and any required notifications prepared pursuant to this Permit;
 - iii. The notice and certification required by a generator under 40 CFR 268.7. (Land Disposal Restrictions) prepared pursuant to this permit;
 - iv. Records of all inspection reports prepared pursuant to this permit; and,
 - v. Records required by 40 CFR 264.1064(d) and (e) for compliance with the Organic Air Emissions Standards for Equipment Leaks, 40 CFR Part 264 Subparts BB.
- c. Current copies of the following documents as amended, revised, and modified shall be maintained at the facility until closure and Corrective Action are complete and certified:
- i. Contingency Plan;
 - ii. Training Plan;

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- iii. All closure, interim measures and final corrective action cost estimates, financial assurance documents prepared pursuant to this Permit, as well as the company names and addresses of facility insurers;

II.J. Schedule Extensions: The Permittee shall notify the Department, in writing, as soon as possible of any deviations or expected deviations from any schedules of Parts I through III or Attachments AA through BB of this Permit. The Permittee shall include with the notification all information supporting its claim that it has used best efforts to meet the required schedules. For the purposes of this permit condition "best efforts" shall include, but not be limited to, performance of all activities necessary to award contract(s) at the earliest opportunity after the information necessary to award the contract(s) is available to the Permittees, adequate planning, adequate funding, adequate operator staffing, adequate laboratory and process controls, operation of a backup or auxiliary facility or similar systems by the Permittees when necessary. If the Director or the Administrator determines that the Permittee has made best efforts to meet the schedules of this Permit, the Director or the Administrator shall notify the Permittee in writing by certified mail that the Permittee has been granted an extension. Such a revision shall not require a permit modification under 40 CFR Section 270.42 and WAC 173-303-830. Copies of all letters pursuant to this Permit condition shall be kept in the Operating Record.

II.K. Organic Air Emissions: The Permittee shall comply with the requirements of 40 CFR Part 264 Subparts BB, organic air emission standards for equipment leaks. This shall include, but not be limited to, complying with the reporting requirements of 40 CFR 264.1065.

list valves

*"CC" final, effective June
Applicability
Dave Bortus*

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PART III - CORRECTIVE ACTION

Investigations of contamination at the Pier 91 corrective action facility to date indicate contamination originating from multiple solid waste management sources. Based on the evidence of these releases as well as the potential for releases from other solid waste management units, site investigation of potential contaminant sources and remediation are necessary at the facility.

For convenience, and based on the varying extent of site characterization conducted to date for different areas of the facility, corrective action requirements are divided into four sections in this Part of the permit (Part III). The four sections consist of three specific corrective action areas and one "General" requirements section. The three specific corrective action areas are, 1) Track One: Oil Line Break, 2) Track Two: Non-TSD SWMUs and AOCs, and 3) Track Three: TSD SWMUs and AOCs.

The "General" corrective action requirements appear in permit sections III.G. through III.X. The "General" requirements are applicable to all permit corrective action activities.

The requirements for "Track One: Oil Line Break" are provided in permit sections III.A. These requirements are for investigating the release associated with SWMU #XX in the RFA.

The requirements for "Track Two: Non-TSD SWMUs and AOCs" corrective action track are provided in permit section III.B. These requirements are for investigating releases from Non-TSD SWMUs and AOCs identified in the RCRA Facility Assessment that have been determined to need further investigation as specified in Table III-5.

The requirements for the "TSD SWMUs and AOCs" corrective action track are provided in permit sections III.C. through III.G. These requirements are primarily for the remediation of contamination sourced from the TSD-leased property, but also include requirements for the investigation of releases from X SWMUs and X AOCs located on or adjacent to the TSD-leased property, as identified in Table III-5.

SWMUS identified in the RFA and in Table III-5 are loosely categorized by their location relative to the present day operator of that location and do not, nor are meant to, ascribe corrective action responsibility.

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III.A. TRACK ONE: INVESTIGATION OF OIL LINE BREAK

III.A.1. RCRA Facility Investigation (RFI) Workplan: Permittees must submit a draft and final RCRA Facility Investigation Workplan in accordance with the requirements of permit condition III.K. for the oil line break, identified as SWMU #XX in the RCRA Facility Assessment and Table III-5. The draft RFI workplan must be submitted in accordance with the schedule contained in Table III-1. In addition to the requirements of permit condition III.K., the workplans must include the following:

a) monitoring of wells EW-1, MW-2, MW-3 MW-102, MW-103, MW-6, and all short-fill water table wells for the presence of LNAPL, and,

b) monitoring for dissolved total petroleum hydrocarbons in any of the wells sampled in accordance with permit condition III.A.1.a., above, that have measurable levels of LNAPL, and,

c) a soils investigation plan to determine the extent of hydrocarbon contamination of the soils from this SWMU.

III.A.2. RFI Report: The Permittees shall submit draft and final RFI Reports in accordance with permit condition III.K. The draft RFI Report shall be submitted in accordance with the schedule contained in Table III-1.

III.A.3. Additional Investigation: If based on the information provided in the RFI Report required above in permit condition III.A.2., the Administrator or Director determine additional investigation is necessary, the Permittees will repeat the requirements of permit conditions III.A.1. (with the exception that the requirements of III.A.1.a.-III.A.1.c. need not be included) and III.A.2. This process of RFI investigating and reporting shall be continued until the Director or Administrator determines one of the following: a) no further action is necessary, b) adequate mitigation activities have been implemented in accordance with permit condition III.I. (stabilization actions), or, c) a remediation workplan is required in accordance with permit condition III.A.4. Such a determination by the Director or Administrator and submission of subsequent work products shall not require permit modification.

→ Flowing
wells
specific
reference
attach
logging for
wells

→ define sufficient to analyze

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- III.A.4. Remediation Workplan: The Permittees shall prepare draft and final remediation workplans in accordance with permit condition III.L. for the remediation of contaminated media associated with releases investigated under permit condition III.A. The draft and final workplans shall be submitted in accordance with the schedule provided in Table III-1 unless the Director or Administrator approves a schedule extension based on the Permittees having conducted adequate stabilization activities in accordance with permit condition III.I. Upon submittal of the final remediation workplan, the Permittees shall request a permit modification in accordance with permit condition II.B.

Class III to add workplan to permit purpose unclear

III.B. **TRACK TWO: NON-TSD SWMU AND AOC CORRECTIVE ACTION**

Note: Permit Section III.B. is corrective action requirements specific to releases from SWMUs and AOCs identified in Table III-5 as requiring "RFI--Non-TSD Track." These SWMUs and AOCs are referred to as "Non-TSD" units to distinguish them from the units that are being addressed under track three, TSD corrective action.

- III.B.1. RCRA Facility Investigation (RFI) Workplan: Permittees must submit a draft and final RCRA Facility Investigation Workplan in accordance with the requirements of permit condition III.K. for the "Non-TSD" SWMUs and AOCs identified in Table III-5 as requiring further investigation. The draft RFI workplan must be submitted in accordance with the schedule contained in Table III-1.
- III.B.2. RFI Report: The Permittees shall submit draft and final RFI Reports in accordance with permit condition III.K. The draft RFI Report shall be submitted in accordance with the schedule contained in Table III-1.
- III.B.3. Additional Investigation: If based on the information provided in the RFI Report required above in permit condition III.B.2., the Administrator or Director determines additional investigation is necessary, the Permittees will repeat the requirements of permit conditions III.B.1. and III.B.2. This process of RFI investigating and reporting shall be continued until the Director or Administrator determines one of the following: a) no further action is necessary, b) adequate mitigation activities have been implemented in accordance with permit condition III.I. (stabilization

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actions), or, c) a remediation workplan is required in accordance with permit condition III.B.4. Such a determination by the Director or Administrator and submission of subsequent work products shall not require permit modification.

- III.B.4. Remediation Workplan: The Permittees shall prepare draft and final remediation workplans in accordance with permit conditions III.L. through III.N. for the remediation of contaminated media associated with releases investigated under permit condition III.B. The draft and final workplans shall be submitted in accordance with the schedule contained in Table III-1 unless the Director or Administrator approves a schedule extension request based on the Permittees having conducted adequate stabilization activities in accordance with permit condition III.I. Upon submittal of the final remediation workplan, the Permittees shall request a permit modification in accordance with permit condition II.B.

III.C.-III.G. TRACK THREE: TSD SWMU AND AOC CORRECTIVE ACTION

Note: Permit sections III.C-III.G. are corrective action requirements specific to releases or potential releases from SWMUs and AOCs identified in Table III-5 as requiring either, 1) RFI--TSD Track, or 2) Remediation--TSD Track.

III.C. Interim Measures

cite actual workplan

- III.C.1. Draft Interim Measures Report: Unless the interim measures workplan, approved September xx, 1994 in accordance with the XXXX RCRA 3008(h) Order, is incorporated into the final remediation workplan approved under III.D.2., the Permittees must submit, in accordance with the schedule provided in Table III-1, a draft report demonstrating completion of stabilization activities and including the following information:

- a) Estimates of amounts of groundwater treated or removed;
- b) Estimates of amounts of product recovered;
- c) Procedures for closing the interim measures system.

- III.C.2. Final Interim Measures Report: If Permittees submit a draft interim measures report in accordance with permit condition III.C.2. above, the Permittees shall submit a final report after the Director or Administrator's

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approval of the draft Interim Measures Report, which may require report modification based on comments received from the Director or Administrator. Such approval and report modification shall not require permit modification. The Permittees shall submit the final Interim Measures Report in accordance with the schedule provided in TABLE iii-1.

*Permittees
now request
revision in
accordance
with comments*

III.D. Remediation of Already Investigated TSD Contamination

III.D.1. Finalization of Pre-Permit RFI Report: Based on comments to the August xx, 1993 "draft RCRA Facility Investigation," contained in Attachment BB of this permit, the Permittees shall submit a final RFI Report in accordance with the schedule provided in Table III-1. Such report modification and report submittal shall not require permit modification.

III.D.2. Remediation Workplan: The Permittees shall prepare draft and final remediation workplans in accordance with permit condition III.L. for the remediation of contaminated media from releases reported in accordance with permit condition III.D.1., unless the Director or Administrator approves a schedule extension request based on the Permittees having conducted adequate stabilization activities in accordance with plans approved in accordance with permit condition III.I. The draft and final workplans shall be submitted in accordance with the schedule provided in Table III-1. Upon submittal of the final remediation workplan, the Permittees shall request a permit modification in accordance with permit condition II.B.

III.E.-III.F. Continued TSD Investigation and Potential Remediation

*Refine
"lower
aquifer"
for sampling*

III.E.1. New Well: In accordance with the schedule contained in Table III-1, the Permittees shall install and develop a well in the lower aquifer along the west side of the BEI leased property, approximately mid-way between wells 103B and 104B in accordance with the procedures approved under BEI's 1992 RFI Workplan or alternatively, as specified in a ground water well installation and development plan submitted thirty (30) days prior to the scheduled date of installation and approved by the Director or Administrator.

III.E.2. Sampling of New Well: Upon completion of installation and development of the new lower aquifer ground water well required in accordance with permit condition

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III.E.1., above, the Permittees shall sample and analyze the new well in accordance with the next scheduled sampling event.

III.E.3. For the first two quarters of sampling after installation of the new lower aquifer well in accordance with permit condition III.E.1., sampling of the lower aquifer wells in accordance with this permit condition shall not be performed in conjunction with any other well sampling. If, based on the sampling results of these two quarters of data plus any other lower aquifer well analytical results from the pre-corrective action sampling program, the Administrator or Director determines that analytical results justify a lower sampling frequency, then the Administrator or Director may make a written determination to ~~lower~~ the sampling frequency of the lower aquifer wells from quarterly to semi-annually. Such a written determination, and any subsequent reduction in sampling frequency shall not require a permit modification. *reduce*

III.E.4. New RFI Workplan: Permittees must submit a draft and final RCRA Facility Investigation Workplan in accordance with the requirements of permit condition III.K. for the TSD SWMUs and AOCs identified in Table III-5 as requiring further investigation. The draft and final RFI workplans must be submitted in accordance with the schedule contained in Table III-1.

III.E.5. RFI Report: The Permittees shall submit draft and final RFI Reports in accordance with permit condition III.K. The draft RFI Report shall be submitted in accordance with the schedule contained in Table III-1.

III.E.6. Additional Investigation: If based on the information provided in the RFI Report required above in permit condition III.E.5., the Administrator or Director determine additional investigation is necessary, the Permittees will repeat the requirements of permit conditions III.E.3. and III.E.4. This process of RFI investigating and reporting shall be continued until the Director or Adminisistrator determine that 1) no further action is necessary, b) adequate mitigation activities have been implemented in accordance with permit condition III.I. (stabilization actions), 3) final disposition of the SWMU or AOC can be managed in accordance with facility closure, or, 4) a remediation workplan in accordance with III.F. is required. Such a determination by the Director or Administrator and

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submission of subsequent work products shall not require permit modification.

III.F. Remediation Workplan: The Permittees shall prepare draft and final remediation workplans in accordance with permit condition III.L. for the remediation of contaminated media from releases investigated in accordance with permit condition III.E., above, unless the Director or Administrator approves a schedule extension request based on the Permittees having conducted adequate stabilization activities in accordance with plans approved in accordance with permit condition III.I. The draft and final workplans shall be submitted in accordance with the schedule provided in Table III-1. Upon submittal of the final remediation workplan, the Permittees shall request a permit modification in accordance with permit condition II.B. In addition to the requirements in permit conditions III.L., the remediation workplan must include the following:

a) Monitoring wells MW-39-3, CP-103A, CP-104A, CP-107, CP-110, CP-113, W-10, CP-116, CP-1117, CP-118, and CP-119, at a minimum, must be within the design of the remediation system's capture zone; and,

b) A plan for conducting a pump test, if well pumping is included in the remediation workplan. The pump test plan must be designed to estimate, 1) pumping rates, 2) treatment capacity, 3) vertical hydraulic conductivities, and 4) expected contaminant levels.

3) horizontal effect of pumping

III.G.-III.X. GENERAL CORRECTIVE ACTION REQUIREMENTS

Note: Sections III.G.-III.X. are Applicable to All Corrective Action

III.G. General Requirements

III.G.1. In the event any permit condition in Part III of this permit is in conflict with any provisions in the approved workplans submitted in accordance with Part III of this permit, the permit condition shall be the applicable requirement.

III.G.2. In accordance with Section 3004(u) of RCRA and the regulations promulgated pursuant thereto, the Permittees must institute Corrective Action as

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necessary to protect human health and the environment for all releases of hazardous waste(s) or hazardous constituent(s) from any solid waste management units (SWMU's) at the facility, regardless of the time at which waste was placed in such units. Based on the available data regarding the levels and extent of contamination at the facility, EPA has determined the need for investigation and remediation at the facility.

*catch all
check*

- III.G.3. In accordance with Section 3004(v) of RCRA and the regulations promulgated pursuant thereto, the Permittees must implement Corrective Action(s) beyond the facility property boundary, where necessary to protect human health and the environment.
- III.G.4. In accordance with 40 CFR 270.32(b)(2), the Administrator has made the determination to include conditions in the permit to address corrective action as necessary to protect human health and the environment for those Areas of Concern (AOCs) identified in Table III-5 as requiring further action. This determination is based on the information contained in the RCRA Facility Assessment and the Administrative Record.
- III.G.5. Nothing in this permit shall limit the Agencies' authority to undertake, or require any person to undertake, response action or corrective action under any law, including (but not limited to): Sections 104 or 106 of CERCLA (42 USC Sections 9604 or 9606), and Section 7003 of RCRA (42 USC Section 6973). Nor shall any permit condition relieve the Permittees of any obligations under any law, including (but not limited to) Section 1103 of CERCLA, to report releases of hazardous wastes, constituents, or substances to, at, or from the facility.
- III.G.6. All plans, reports, and schedules required by the terms of this Permit are, upon approval by the Agencies, incorporated into this Permit. Any noncompliance with such approved plans, reports, and schedules shall be considered noncompliance with this permit.
- III.G.7. Failure to submit the information required in this Permit, or falsification of any submitted information is grounds for termination of the permit. All information submitted must be certified, as required by 40 CFR 270.11(d).

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Part I*

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III.G.8. In the event that the Agencies disapprove of any plan, report, or schedule required by this Permit, and approval of the submittal as specified in this Permit does not require a permit modification under WAC-173-303-830 or 40 CFR 270.41, either the Agencies or the Permittees may initiate the dispute resolution process specified in Permit Condition III.W. Under this permit condition each plan, report, and schedule shall be considered separately.

III.G.9. Equivalent Materials and Methods: If certain equipment, materials, and methods are specified in this Part (Part III), the Permittees are allowed to use equivalent or superior equipment, materials, or methods. Use of such substantially equivalent or superior items shall not be considered a modification of the Permit, but the Permittees must place in the Operating Record such a revision, accompanied by a narrative explanation, and the date the revision became effective. The Agencies may judge the soundness of the Permittees' determination during inspections of the facility, or in responses to facility submittals, and take appropriate action.

III.H. RFI and CMS Progress Reports: Permittees shall submit progress reports on all RFI and Remediation work to the Director and Administrator within 6 months of the effective date of this permit and every 6 months thereafter. Each progress report shall contain the following information:

- quarterly*
want more
not once a month
- a) A description and estimate of the work completed;
 - b) Summaries of all findings;
 - c) Summaries of all problems encountered during the reporting period;
 - d) Actions taken to rectify problems; and,
 - e) Projected work for the next reporting period.

III.I. Stabilization Actions

III.I.1. Based upon the Director or Administrator's determination of the need for stabilization actions, the Permittees shall submit to the Director or Administrator either a justification in accordance with III.I.1.a. for why stabilization actions are

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unnecessary or, alternatively, a draft stabilization actions workplan in accordance with III.I.1.b.

a) Provide a justification for why stabilization actions are unnecessary at the facility based on the schedule for final remediation, and responses to the questions contained in Attachment NN. In responding to the questions in attachment NN, particular consideration must be given to the potential for releases to Lake Jacob and Puget Sound.

b) The stabilization actions workplan shall, at a minimum, include the following:

i) A proposal and justification for the design, construction, operating procedures, inspection, and maintenance of the stabilization system to address areas of contamination identified by the Administrator or Director;

ii) A summary of all relevant monitoring data and qualitative information about the proposed locations for interim measures;

iii) A data collection and management plan for obtaining and reporting quality assured results of system performance;

iv) Performance goals that will determine the extent of the stabilization measures;

v) A content description and submittal schedule for progress and final reports; and,

vi) A schedule for the initiation and completion of plan activities.

III.I.2. Final Justification or Stabilization Action Workplan:
After the Director or Administrator or Director's approval, which may require the justification submitted under III.I.1.a. or the workplan submitted under III.I.1.b. to be modified, the final stabilization measures justification or stabilization action workplan shall be submitted by the Permittees in accordance with the schedule provided in writing by the Director or Administrator. Such approval or modification shall not require a permit modification.

III.I.3. If the Director or Administrator approves a Stabilization Action Workplan in accordance with permit

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condition III.I.2., the Permittees shall complete the tasks of the workplan in accordance with its terms and schedule.

III.J. Pre-Remediation Monitoring

III.J.1. Draft Pre-Remediation Monitoring Plan: The Permittees shall submit to the Director or Administrator in accordance with the schedule contained in Table III-1 of this permit a draft plan for monitoring of the groundwater until the implementation of the groundwater remediation monitoring program. At a minimum, this plan shall include the following:

a) Monitoring of the wells listed in Table III-2 at the sampling frequencies listed in Table III-2;

b) A listing of monitoring constituents that includes the clean-up goal constituents contained in Table III-4;

c) Program operation requirements in accordance with permit condition III.O.;

d) Well construction, maintenance, and replacement requirements in accordance with permit condition III.R.; and,

e) A schedule for the initiation and completion of all tasks described in the plan.

III.J.2. Final Pre-Remediation Monitoring Plan: After the Director or Administrator's approval, which may require the plan to be modified, a final Pre-Corrective Action Monitoring Plan shall be submitted by the Permittees in accordance with the schedule provided in writing by the Director or Administrator. Such approval and plan modification shall not require a permit modification.

III.J.3. Upon approval by the Director or Administrator of the monitoring plan required in accordance with III.J.2., the Permittees shall complete the tasks described in the monitoring plan in accordance with its terms and schedules.

III.J.4. Modification to Pre-Remediation Monitoring Plan: As site investigation and remediation proceed, the need to modify the list of pre-remediation monitoring wells may become necessary. The Permittees may add additional

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*add ability
for Director
add*
wells to the monitoring list without the need for a permit modification. To remove wells from the pre-remediation monitoring list, the Permittees must submit a permit modification in accordance with permit condition II.B. *→ Director*

III.K.

RFI Process

III.K.1. RFI Workplan Contents: Draft RFI Workplans, must at a minimum include the following:

a) Plans to investigate the nature, extent, direction, rate, movement, and concentration of releases from SWMUs and AOCs as appropriate;

b) a brief justification for investigation approach selected for each SWMU or AOC;

c) quality assurance/quality control plans for all site investigation work consistent with State/EPA guidance; *not explicit*

d) terms and schedule for completing RFI tasks.

III.K.2. Final RFI Workplans: After the Director or Administrator's approval of the Draft RFI Workplans, which may require workplan modification, final RFI Workplans must be submitted by the Permittees in accordance with the schedule provided in writing by the Director or Administrator. Such approval and workplan modification shall not require permit modification. Upon the Director or Administrator's approval, the Permittees must complete the tasks outlined in the RFI Workplans in accordance with the RFI Workplans' terms and schedule.

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III.K.3. Amendments to RFI Workplans: Amendments to final RFI Workplans may become necessary due to the discovery of new information obtained in the course of the RFI investigations. The Permittees shall submit such workplan amendments to the Director or Administrator for approval. If the Permittees do not submit a workplan amendment within 60 days of receipt of new information, the Director or Administrator may initiate a permit modification pursuant to permit condition II.B. Such approval of submitted workplan amendments and any necessary workplan modification required by the Director or Administrator shall not require a permit modification.

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III.K.4. RFI Workplan Amendment Approval: Upon final approval of any workplan amendment or permit modification made in accordance with permit condition III.K.3. above, the Permittees shall complete the tasks outlined in the workplan amendment or permit modification in accordance with their respective terms and schedules.

III.K.5. Draft RFI Reports: Draft RFI Reports, at a minimum, shall:

a) incorporate all relevant information from previous investigations as well as summarize and evaluate all data collected in accordance with the applicable RFI;

b) based on the investigation results discuss conclusions and suggestions for next steps of investigation.

III.K.6. Final RFI Reports: After the Director or Administrator's approval, which may require report modification, final RFI reports shall be submitted by the Permittees in accordance with the schedule provided in writing by the Director or Administrator. Such approval and report modification shall not require permit modification.

III.L. Remediation

III.L.1. Draft Remediation Workplans: Draft remediation workplans must, at a minimum, meet the following requirements:

a) contain plans for the design, construction, operation, inspection, maintenance, and repair of a remediation system;

b) Must address applicable local, State and Federal regulatory requirements;

c) Must provide source control to minimize the continued transport of contaminants;

d) Must be capable of remediating media contaminated by identified releases from the facility to obtain performance and clean-up goals.

{ e) Include the clean-up goals in Table III-4, or the most recent EPA published health-based criteria, or the most recent Model Toxics Control Act standards in

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accordance with MTCA xx.xx for establishing and maintaining the capture zone; *not stringent*

f) Must include a schedule for determining final clean-up standards that are protective of human health and the environment;

g) Must include a remediation groundwater monitoring plan in accordance with permit condition III.M., unless the Administrator or Director determine groundwater monitoring is not appropriate;

h) Must include a groundwater compliance monitoring (monitoring of groundwater after clean-up standards have been achieved) plan in accordance with permit condition III.N., unless the Administrator or Director determine ground water monitoring is not appropriate;

i) Must include a project schedule for initiation and completion of tasks contained in the plan. Remediation actions may be phased if source control and plume capture are given first priority; and,

j) Must meet the following criteria:

i) the performance, reliability, ease of implementation, and safety of the proposed remediation system shall be demonstrated by laboratory bench scale studies or by methods determined by the Director or Administrator to be equivalent;

ii) the proposed remediation system must examine practicable means to minimize the direct transfer of contamination from the soil or groundwater to another media and to permanently reduce the overall degree of risk by the use of destruction or treatment;

iii) the remediation system posing the least adverse impact to the environment and providing destruction of contaminants as opposed to simply removal of contaminants, will be favored. *broader term - to include off site treatment*

k) Must comply with the standards for management of waste generated by the remediation activities.

III.L.2. Final Remediation Workplan: Upon final approval of the Remediation Workplan, the Permittees shall implement

*Tidal effects
in upper or lower
aquifer
Reversing
flow
Tidal effects*

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the Remediation Workplan in accordance with the terms and schedule of the approved workplan.

III.L.3. Modification of Final Remediation Workplan:

Modifications to the final remediation workplan for additional additional work based on further contaminant migration or a determination of need for remediation of additional areas shall not require a permit modification.

III.M. Groundwater Remediation Monitoring (As required in accordance with III.L.1.)

III.M.1. Groundwater Remediation Monitoring Plan: The remediation monitoring plan required by permit condition III.L.1.g. must include plans to design, construct, operate, maintain, inspect, and repair a groundwater monitoring system capable of monitoring the effectiveness of the remediation system and must include, at a minimum, the following additional requirements:

- a) Designated monitoring locations providing a sufficient number of wells, installed at appropriate locations and depths, to yield samples that represent the quality of groundwater which have been impacted by the facility;
- b) Sufficient wells to demonstrate reversal of contaminant flow within the capture zone;
- c) The monitoring wells and monitoring frequencies listed in Table III-3;
- d) Designated monitoring constituents that include the clean-up goals listed in Table III-4;
- e) The program operation requirements in accordance with permit condition III.O.;
- f) The data evaluation requirements in accordance with permit condition III.P.;
- g) The well construction, maintenance and replacement requirements in accordance with permit condition III.R.; and,
- h) Project schedule for conducting activities including submittal of quality assured sampling results.

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III.N. Compliance Monitoring (As required in accordance with III.L.1.h. and established to monitor ground water after clean-up standards have been achieved)

III.N.1. Compliance Monitoring Plan: The compliance monitoring plan required by permit condition III.L.1.h. must, at a minimum include the following:

☆
a) plans to design, construct, operate, maintain, inspect, and repair a groundwater compliance monitoring system capable of yielding samples that represent the quality of groundwater which would be impacted by the migration of contamination from the facility in the groundwater;

b) Sufficient wells to demonstrate that the groundwater is in compliance with the established clean-up standards established;

c) Designated monitoring well locations and monitoring frequencies;

d) Designated monitoring constituents including the clean-up standard constituents listed in Table III-4;

e) The program operation requirements in accordance with permit condition III.O.;

f) The data evaluation requirements in accordance with permit condition III.Q.; and,

g) The well construction, maintenance, and replacement requirements in accordance with permit condition III.R.

III.O. Program Operation (as required in accordance with III.J., III.M., and III.N.)

III.O.1. The Permittees shall use the techniques and procedures specified in the most recent edition of EPA SW-846, Test Methods for Evaluating Solid Waste, and well sampling procedures in accordance with the RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, and sampling plans as approved under Part III of this permit when collecting, preserving, shipping, analyzing, tracking and controlling samples required by Part III of this permit.

III.O.2. The Permittees shall obtain water level elevation measurements from each monitoring well specified in the

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plan. Measurements for each monitoring well shall be obtained prior to purging of the well. In order to minimize the potential for error caused by temporal variations, the Permittees shall obtain all water level elevation measurements within as short a time period as possible, not to exceed one working day.

The Permittees shall use these data to determine the rate and direction of groundwater flow at least annually for the periods of high and low water table elevation. The resultant contour maps and flow rates shall be submitted to the Director or Administrator by the anniversary date of this permit of each year. The Permittees shall submit, with the contour maps, a written review of the adequacy of the groundwater monitoring system to detect contaminant movement relative to observed groundwater flow directions.

III.O.3. Quality assured results of analyses, including laboratory detection limits achieved for each constituent, shall be submitted to the Director or Administrator within thirty (30) calendar days of the Permittees' receipt of results from the laboratory. In no case shall the period between the date of sampling and the date of submission of analytical results exceed ninety (90) calendar days unless an extension is granted by the Director or Administrator.

III.O.4. The Permittees shall annually analyze a groundwater sample from one well, selected by the Permittees, for all 40 CFR 264 Appendix IX constituents. The well selected by the Permittees requires the approval of the Director or Administrator. Selection and approval of the monitoring well identified for 40 CFR 264 Appendix IX monitoring shall not require a permit modification. Selection and approval of the monitoring well shall be based on location and the number and levels of contaminants detected at the proposed well location. The Permittees shall submit the results of this analysis to the Director or Administrator within thirty (30) calendar days of the Permittee's receipt of results from the laboratory. In no case shall the period between the date of sampling and the date of submission of analytical results exceed ninety (90) calendar days unless an extension is granted by the Director or Administrator.

*Appendix IX
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just upper*

III.O.5. For any constituent(s) detected under permit condition III.O.4. that is not included in the monitoring program

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currently in effect under the permit, the Permittees shall:

- Loop back to V*
- a. Add the newly detected constituent(s) to the list of monitoring constituents, and provide the Director or Administrator with a copy of the revised list for inclusion into the permit within forty-five (45) days of determining that a change to the monitoring list is required. Such modification to the constituent monitoring list will not require a permit modification; or,
 - b. Submit a report justifying why the detected constituent(s) should not be included in the monitoring program. If the Director or Administrator does not accept the Permittees' justification, the Permittee shall add the constituent to the monitoring list in accordance with III.0.5.a. If the Director or Administrator accepts the justification, the constituent does not have to be added to the list of monitoring constituents; or,
 - c. Submit a notice that the Permittees have resampled and are repeating the analysis for the newly detected constituent(s). Within thirty (30) calendar days of the Permittees' receipt of results of the second analysis, the Permittees shall submit the results of the second analysis and either add the newly detected constituent(s) to the list of monitoring constituents pursuant to III.0.5.a., or submit a report justifying why the detected constituent(s) should not be included in the monitoring program pursuant to VII.G.5.a.
- [Handwritten star and arrow pointing to VII.G.5.a.]*

III.0.6. For any constituent(s) added to the list of ground water monitoring constituents in accordance with permit condition III.0.5.a. above, a clean-up goal for that constituent(s) will be determined and added to the table of clean-up goals under this permit. The permittees shall calculate the clean-up goal using the formula in the footnote to Table III-4 and submit to the administrator a revised table of clean-up standards including the new constituent(s) for inclusion into the permit within forty-five (45) days of determining that a new constituent must be added to the list of monitoring constituents. Such modification to the list of clean-up goals will not require a permit modification.

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- III.O.7. The Permittees shall enter all monitoring, testing, and analytical data obtained pursuant to this permit in the operating record in accordance with permit condition II.I.

In addition, all monitoring, testing, and analytical data obtained pursuant to this permit shall be submitted to EPA Region 10 in digital data files on computer diskette (or other mutually agreeable magnetic media, such as cartridge tape). These data files shall be formatted in accordance with instructions provided by EPA Region 10 Data Management staff.

- III.P. Data Evaluation for Remediation Monitoring (as required in accordance with III.P.1.)

- III.P.1. Within 12 months of the start-up of the ground water remediation system and annually thereafter while groundwater remediation monitoring plan is in effect, the Permittees must submit to the Director or Administrator a demonstration that adequate progress is being made towards meeting the clean-up standards established under the permit or, if the Permittee cannot demonstrate that adequate progress is being made, the Permittees must submit a permit modification request to more effectively meet the clean-up standards established under this permit and a schedule for implementing the plan. This permit modification request will be processed within the administrative requirements of 40 CFR 270.42.

For the purposes of this permit condition the term "adequate progress" shall be defined as:

a) In compliance with the objectives of containment and capture of contaminated groundwater required in accordance with permit condition III.L.; and,

b) A showing that each well in the approved groundwater monitoring plan is either in compliance with the clean-up standards established under this permit, or exhibits a continuing decline in the concentration of those constituents above the clean-up standard. This decline shall be demonstrated by a negative slope for the best fit line among the constituent concentration levels of the previous eight (8) consecutive quarterly sampling event results for each constituent above the clean-up standard for that monitoring well.

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III.P.2. After the Permittees has determined that the clean-up standards established in permit condition III.D.2. have been met for four (4) consecutive quarterly sampling events for all parameters at all monitoring points under the approved remediation workplan, the Permittees shall:

- a) Notify the Director or Administrator in writing within 30 calendar days of making this determination;
- b) Cease operation of the approved remediation system;
- c) Implement the approved compliance monitoring plan; and,
- d) Maintain the approved remediation workplan system in readiness for restarting.

III.Q. Data Evaluation for Compliance Monitoring (as required in accordance with III.L.1.)

III.Q.1. The groundwater data obtained in accordance with the compliance monitoring plan shall be compared to the established clean-up standards. Any constituent equal to or above the clean-up standard will be considered an indication of contamination. Any constituent less than the clean-up standard will be considered to be in compliance with that standard.

III.Q.2. Upon detection of constituents in any monitoring well exceeding the clean-up standards established under this permit, the Permittees shall:

- a) Notify the Director or Administrator of this finding, in writing, within seven (7) calendar days; and,
- b) Immediately collect two (2) samples from any affected well(s), purging the well(s) between samples, and reanalyze both samples for all constituents with clean-up standards established in this permit.

III.Q.3. If analytical results from:

- a) Neither verification sample described in permit condition III.Q.2.b. confirm the detection of constituents above the clean-up standards, the Permittees shall resume compliance monitoring according to the established schedule and notify the Director or

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Administrator that the compliance monitoring program is being resumed;

b) Only one of the verification samples described in permit condition III.Q.2.b. confirms the detection of constituents above the clean-up standards, the Permittees shall repeat the verification procedure which begins in permit condition III.Q.2.;

c) Both verification samples described in permit condition III.Q.2.b. confirm the detection of constituents above the clean-up standards, the Permittees shall:

i) Re-implement the approved remediation workplan system within 90 days; or,

ii) Submit to the Director or Administrator, within seven (7) calendar days, notice that the Permittees intend to demonstrate that an off-site source caused the increase. A report of this demonstration shall be made within ninety (90) calendar days. If necessary, an application for a permit modification to make any appropriate changes to the compliance monitoring program shall be submitted with the report; and,

iii) Continue to monitor in accordance with the approved compliance monitoring program in effect.

III.Q.4. If, as determined by the Director or Administrator, the notice submitted in accordance with permit condition III.Q.3.c.ii. fails to identify any off-site source of contamination, then the Permittees shall re-implement the approved remediation workplan within 60 days. If the Director or Administrator approves the notice, then the Permittees shall continue to monitor in accordance with the approved compliance monitoring program.

III.Q.5. If sampling results remain below the clean-up standards for three (3) years or twelve consecutive quarterly sampling events (whichever is more) after the approved Remediation Workplan system has ceased to operate in accordance with permit condition III.P.2., the Permittees may implement the approved closure plan for the remediation workplan system. The Permittees shall notify the Director or Administrator in writing after the eighth consecutive quarterly sampling event that it intends to discontinue the compliance monitoring program after four (4) additional quarterly sampling

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events if the levels continue to be in compliance with the established clean-up standards.

This three (3) year compliance monitoring period shall begin anew each time the remediation workplan system is de-activated in accordance with III.P.2.

III.R. Well Construction, Maintenance, and Replacement (as required in accordance with permit conditions III.J., III.M., and III.N.)

III.R.1. The Permittees shall maintain all monitoring wells in good working order, making necessary repairs in a timely manner so that the sampling program is not hindered or delayed in any way. The Permittee shall maintain an adequate supply of replacement parts and repair equipment as necessary to ensure that each sampling event proceeds on schedule.

III.R.2. Visual evidence of damage to or deterioration of wells, and complete records of all well maintenance activities, must be noted in the operating record.

III.R.3. The Permittees shall maintain ^{documented} borehole integrity of each monitoring well, using one of the methods designated in permit conditions III.R.3.a., III.R.3.b., or III.R.3.c., consistently using the same method for each well.

a) For any existing monitoring well, the Permittees shall calculate the specific capacity of that well during the first sampling event after the effective date of this permit. The specific capacity shall then be recalculated for that well on a biennial basis during the term of this permit. If, at any time, the specific capacity of that well decreases by more than twenty percent (20%) of the original calculated value, that well shall be redeveloped to within five percent (5%) of the original specific capacity.

For any well installed during the term of this permit, the Permittees shall calculate the specific capacity during the first sampling event for which that well is available for sampling. The recalculation and redevelopment criteria, as specified above for existing wells, shall then be followed by the Permittees; or,

b) The well shall be sounded on an annual basis. If the well has a build up of one (1.0) foot or more of

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sediment at the bottom, the well shall be redeveloped and the sediment removed; or,

c) For any existing monitoring well, the Permittees shall perform a slug test on the well to determine the hydraulic conductivity of the well during the first sampling event after the effective date of this permit. A slug test shall then be performed on the well on a biennial basis using the same slug test method. If the hydraulic conductivity determined by this method decreases by twenty percent (20%) or greater from the original value, that well shall be redeveloped to within five percent (5%) of the original hydraulic conductivity.

For any well installed during the term of this permit, the Permittees shall perform a slug test to determine the hydraulic conductivity during the first sampling event for which that well is available for sampling. The re-performance of the slug test and the redevelopment criteria, as specified above for existing wells, shall then be followed by the Permittee.

III.R.4. If a monitoring well must be decommissioned and replaced for any reason during the term of this permit, it shall be replaced prior to the next scheduled sampling event. Prior to decommissioning, the Permittees shall give notice in writing to the Director or Administrator of the rationale for the decision.

The replacement well shall be installed as close as practicable to the well being replaced. The Permittees shall provide information regarding the new well in the operating record and to the Director or Administrator as specified by permit conditions III.R.6. and III.R.7.

The Permittees shall close each well being replaced no later than ninety (90) calendar days after installation of the replacement well. Unless samples from that well have been at or below the clean-up standards specified in this permit for three (3) consecutive years, closure for wells that are not separated from the contaminated zones by a well-defined aquitard (defined below) shall be accomplished by pulling the casing or drilling out the casing and screen, redrilling the borehole, and backfilling the entire depth of the borehole with a three to five percent (3% - 5%) bentonite and cement grout, using a tremie pipe. With prior EPA approval, wells that are separated from the contaminated zones by a continuous, well-defined aquitard can be abandoned by

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having their casings ripped below the seal, to destroy the screen and filter pack, and then be pressure grouted from the bottom up. Equivalent or superior methods may be substituted upon written approval of such substitution by the Director or Administrator. Such substitution and approval will not require a permit modification.

*Supercedes
other permits
material permit
condition*

III.R.5. Minor deviations from the abandonment procedures specified in III.R.4. deemed necessary by the Permittees due to unforeseen events in the field at the time of well abandonment shall not be considered a modification of this permit. The Permittee shall place a notation of such a deviation, accompanied by a narrative explanation, in the operating record. The Director or Administrator may judge the soundness of this determination during inspections of the facility and take appropriate action.

III.R.6. Inspection of drilling and well construction of any new or replacement monitoring well shall be performed by a qualified geologist. The geologist shall construct and maintain a detailed log of each well describing the geologic strata encountered during drilling. The logs and descriptions shall include:

- (a) Date and time of construction;
- (b) Drilling method and any fluid used;
- (c) Well location (surveyed to within 0.5 feet);
- (d) Borehole diameter and well casing diameter;
- (e) Well depth (to within 0.1 feet);
- (f) Drilling logs and lithologic logs from the field, including a description of soil or rock types, color, weathering, texture, structure, and fractures;
- (g) Casing materials;
- (h) Screen material and design, including screen length and slot size;
- (i) Casing and screen joint type;
- (j) Filter pack material, including size and placement method and approximate volume;
- (k) Composition and approximate volume of sealant material and method of placement;
- (l) Surface seal design and construction;
- (m) Well development procedures;
- (n) Ground surface elevation (to within 0.01 feet);
- (o) Top of casing elevation (to within 0.01 feet); and,
- (p) Detailed drawing of well, including dimensions.

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III.R.7. The Permittees shall submit the logs and descriptions obtained pursuant to permit condition III.R.6., as-built drawings, and location information of the new well to the Director or Administrator within sixty (60) calendar days after completion of the well. Such submission shall not be considered a modification of the permit.

1, Closure plan in a month or less, possibly 90 days

III.S. Remediation Workplan System Closure The Permittees shall submit to the Director or Administrator a closure plan for the approved Remediation Workplan system in effect under the permit, at least 90 calendar days before closure is anticipated. The Permittees shall submit a closure plan as a permit modification request in accordance with 40 CFR 270.42. The closure plan should include detailed procedures and a schedule for the disposal or decontamination of all elements of these systems.

III.T. Remediation Workplan System Program Cost Estimate

III.T.1. Within 30 calendar days of the Director or Administrator's approval of the Remediation Workplan system, the Permittees shall prepare a detailed estimate of the capital, operating, and monitoring costs for the Remediation Workplan system.

III.T.2. Within 30 calendar days of the Director or Administrator's approval of the closure plan for a remediation workplan system, the Permittees shall prepare a detailed estimate of the costs for implementing the closure plan for the Remediation Workplan system.

III.T.3. The Permittees shall annually adjust the cost estimates for inflation within 30 calendar days after each anniversary of the date on which the first cost estimates were prepared under permit conditions III.T.1. and III.T.2., or within 30 days of the publication of the new year's inflation factor if the new year's inflation factor is released after the anniversary date of when the first cost estimates were prepared under permit conditions III.L.1. and III.L.2.

III.T.4. Upon completion of the physical construction of the Remediation Workplan system, the Permittees may adjust the costs to reflect the expenditure up to the

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projected capital costs included in the estimate submitted in accordance with permit condition III.T.1.

III.T.5. The Permittees shall prepare a revised cost estimate for the Remediation Workplan system and for the closure of the Remediation Workplan system within 30 calendar days of an approved modification of the Remediation Workplan system.

III.T.6. The Permittees shall keep a copy of the latest cost estimates made in accordance with permit conditions III.T.1. and III.T.2., and any adjustments made in accordance with permit conditions III.T.3., III.T.4., and III.T.5 in the operating record in accordance with permit condition II.I.

III.U. Remediation Workplan System Financial Assurance The Permittees shall establish and maintain financial assurance by one of the forms provided for under 40 CFR 264.143 in the amount of the cost estimates required in accordance with permit condition III.T. The Permittees shall provide the Director or Administrator documentation of this financial assurance within 60 calendar days of the Permittees' submittal of the cost estimates in accordance with permit condition III.T.

III.V. Discovery of Releases or Potential Releases

III.V.1. Reporting Releases: If at any time during the term of this Permit the Permittees discover a release of hazardous waste or hazardous constituents at the facility or the potential of a release from a solid waste management unit regardless of the time of the release which is not identified in the RCRA Facility Assessment and which may pose a threat to human health or the environment, the Permittees shall notify the Agencies in writing of the nature, source, extent, location, and magnitude of such a release within fifteen (15) calendar days of such a discovery.

III.V.2. If, based on the information submitted in III.V.1. above, the Agencies determine that the Permittees have not taken adequate voluntary action or the Permittees have not submitted a Stabilization Workplan in accordance with permit condition III.I., the Administrator or Director may initiate a stabilization workplan submission requirement in accordance with permit condition III.I.

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III.W. Dispute Resolution

III.W.1. In the event the Director or Administrator rejects, in whole or in part, any plan, report, or schedule required by Part III of this permit and doesn't require a permit modification, the following procedure will apply:

a) The Director or Administrator will notify the Permittees in writing of the acceptance, rejection, or proposed modification to, the plan, schedule, report, or submittal. Such notice shall:

i) Identify the problem(s) and, where appropriate, suggest the exact change(s) which need to be made to the plan, schedule, or submittal;

ii) Provide an explanation and supporting documentation or data of why modification is needed; and,

iii) In the event the Director or Administrator proposes a modification, the notice will provide a date by which comments on the proposed modification must be received from the Permittees. Such date will not be less than thirty (30) calendar days from the date of the Permittees' receipt of the notice under permit condition III.W.1.a.

b) If the Director or Administrator receives no written comments on the proposed modification from the Permittees, the modification will become effective five (5) calendar days after the close of the comment period specified under condition III.W.1.a.iii. The Director or Administrator will promptly notify the Permittees that the modification has become effective.

c) If the Permittees submit written comments on the proposed modification, the Director or Administrator shall make a final determination concerning the modification within thirty (30) calendar days after the end of the comment period, if practicable. The Director or Administrator shall then notify the Permittees in writing of the final decision. Such notification shall:

i) Indicate the effective date of the modification, which shall be no later than fifteen

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(15) calendar days after the date of notification of the final modification decision;

ii) Include an explanation of how comments were considered in developing the final modification; and,

iii) Provide a copy of the final modification.

III.W.2. Modifications initiated and finalized by the Director or Administrator using the procedure specified in permit condition III.W.1. do not require permit modification and are not subject to administrative appeal.

III.X. Off-site Access

III.X.1. To the extent that work required by this permit must be done on property not owned or controlled by the Permittees, the Permittees shall use its best efforts to obtain site access agreements from the present owner(s) of such property. "Best efforts" shall mean, at a minimum, a certified letter from the Permittees to the relevant property owner(s) stating the need and purpose for site access and requesting access to such property by the Permittees, EPA, and EPA's authorized representatives. Also, if a reply is received from the property owner(s), the Permittees shall send follow-up letters as appropriate to clarify the work contemplated and address the owner's reasonable concerns. The Agency may assist the Permittees in obtaining such agreements.

III.Y. Other Permits And/Or Approvals

To the extent that work required by this permit must be done under a permit(s) and/or approval(s) pursuant to other Federal, State, or local regulatory authorities, the Permittees shall use its best efforts to obtain such permits. For the purposes of this permit condition "best efforts" shall mean submittal of a complete application for the permit(s) and/or approval(s) at the earliest opportunity after the information necessary to prepare the application is available to the Permittees.

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TABLE III-1: CORRECTIVE ACTION COMPLIANCE SCHEDULE

Permit Condition	Due Date*
II.I.2. Biennial Report	March 1 of each even year
<u>Track One-Line Oil Spill</u>	
III.A.1. Draft RFI Workplan	45 days after permit effective date
III.A.1. Final RFI Workplan	Provided in writing by the Administrator or Director
III.A.2. Draft RFI Report	120 days from sampling of monitoring wells in accordance with schedule approved under permit condition III.A.1.
III.A.2. Final RFI Report	Provided in writing by the Director or Administrator
III.A.3. Additional Investigation (if needed)	Provided in writing by the Director or Administrator
III.A.4. Draft Remediation Workplan	60 days after approval of RFI Report in accordance with permit condition III.A.2.
III.A.4. Final Remediation Workplan	Provided in writing by the Director or Administrator
<u>Track Two: Non-TSD SWMUs and AOCs</u>	
III.B.1. Draft RFI Workplan	90 days after permit effective date
III.B.1. Final RFI Workplan	Provided in writing by the Administrator or Director
III.B.2. Draft RFI Report	120 days from investigation sampling in accordance with workplan schedule approved in

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accordance with permit
condition III.B.1.

III.B.2. Final RFI Report

Provided in writing by the
Director or Administrator

III.B.3. Additional Investigation
(if needed)

Provided in writing by the
Director or Administrator

III.B.4. Draft Remediation Workplan

60 days after approval of RFI
Report in accordance with
permit condition III.B.2.

III.B.4. Final Remediation Workplan

Provided in writing by the
Director or Administrator

Track Three: TSD SWMUs and AOCs

III.C.1. Draft Interim Measures Report

45 days prior to planned
closure of interim measures
system

III.C.2. Final Interim Measures Report

Provided in writing by the
Director or Administrator

III.D. Final Pre-Permit RFI Report

60 days from permit effective
date

III.E.1. New Well

60 days from permit effective
date

III.E.4. Draft New RFI Workplan

120 days after permit
effective date

III.E.4. Final New RFI Workplan

Provided in writing by the
Adminstrator or Director

III.E.5. Draft New RFI Report

120 days from investigation
sampling in accordance with
RFI schedule approved in
accordance with permit
condition III.F.1.

III.E.5. Final New RFI Report

Provided in writing by the
Director or Administrator

III.E.6. Additional Investigation
(if needed)

Provided in writing by the
Director or Administrator

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III.F. Draft Remediation Workplan

60 days after approval of RFI
Report in accordance with
permit condition III.E.5.

III.F. Final Remediation Workplan

Provided in writing by the
Director or Administrator

General Corrective Action Requirements

III.H. RFI and Remediation Progress Reports

180 days from permit effective
date and semi-annually
thereafter through submission
of the final RFI report.

III.I.1. Draft Stabilization Action
Justification or Workplan

Provided in writing by the
Director or Administrator

III.I.2. Final Stabilization Workplan
or Justification

Provided in writing by the
Director or Administrator.

TABLE III-1: CORRECTIVE ACTION COMPLIANCE SCHEDULE (continued)

<u>Item No.</u>	<u>Permit Condition</u>	<u>Due Date*</u>
<u>III.J.1.</u>	Draft Pre-Remediation Monitoring Workplan	30 days after permit effective date.
<u>III.J.2.</u>	Final Pre-Remediation Monitoring Workplan	Provided in writing by the Director or Administrator.
<u>III.S.</u>	Closure Plan for Remediation System	At least 90 days before closure is anticipated

*All references to days are to calendar days.

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TABLE III-2: PRE-REMEDATION MONITORING PROGRAM

<u>Well</u>	<u>Water Quality Monitoring Frequency</u>	<u>Water Level Elevation Measurement Frequency**</u>
CP-103A	Quarterly	Monthly 12 mos./Quarterly
CP-103B	Quarterly*	Monthly 6 mos./Quarterly
CP104A	Quarterly	Monthly 12 mos./Quarterly
CP-104B	Quarterly*	Monthly 6 mos./Quarterly
CP-105A	Quarterly	Monthly 12 mos./Quarterly
CP-105B	Quarterly*	Monthly 6 mos./Quarterly
CP-106	Quarterly	Monthly 12 mos./Quarterly
CP-106B	Quarterly*	Monthly 6 mos./Quarterly
CP-107A	Quarterly	Monthly 12 mos./Quarterly
CP-107B	Quarterly*	Monthly 6 mos./Quarterly
CP-108A	Quarterly	Monthly 12 mos./Quarterly
CP-108B	Quarterly*	Monthly 6 mos./Quarterly
CP-109	Quarterly	Monthly 12 mos./Quarterly
CP-110	Quarterly	Monthly 12 mos./Quarterly
W-10	Quarterly	Monthly 12 mos./Quarterly
CP-111	Quarterly	Monthly 12 mos./Quarterly
CP-112	Quarterly	Monthly 12 mos./Quarterly
CP-113	Quarterly	Monthly 12 mos./Quarterly
CP-114	Quarterly	Monthly 12 mos./Quarterly
CP-115	Quarterly	Monthly 12 mos./Quarterly
CP-115B	Quarterly*	Monthly 6 mos./Quarterly
CP-116	Quarterly	Monthly 12 mos./Quarterly
CP-117	Quarterly	Monthly 12 mos./Quarterly
CP-118	Quarterly	Monthly 12 mos./Quarterly
CP-119	Quarterly	Monthly 12 mos./Quarterly
CP-120	Quarterly	Monthly 12 mos./Quarterly
CP-122B	Quarterly*	Monthly 6 mos./Quarterly
MW-2***	Quarterly	Monthly 12 mos./Quarterly

*Monitoring frequency may be adjusted to semi-annually based on the determination in accordance with permit condition III.E.3.

**Monthly 12/6 mos./Quarterly = monthly for the first 12 (or 6) months of pre-corrective action monitoring and quarterly thereafter.

***MW-2 or an approved substitute well

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TABLE III-3: REMEDIATION MONITORING PROGRAM

<u>Well</u>	<u>Water Quality Monitoring Frequency</u>	<u>Water Level Elevation Measurement Frequency</u>
CP-103A	Quarterly	Quarterly
CP-103B	Quarterly**	Quarterly
CP104A	Quarterly	Quarterly
CP-104B	Quarterly**	Quarterly
CP-105	Quarterly	Quarterly
CP-106	Quarterly	Quarterly
CP-106B	Quarterly**	Quarterly
CP-107A	Quarterly	Quarterly
CP-107B	Quarterly**	Quarterly
CP-108	Quarterly	Quarterly
CP-108B	Quarterly**	Quarterly
CP-109	Quarterly	Quarterly
CP-110	Quarterly	Quarterly
W-10	Quarterly	Quarterly
CP-111	Quarterly	Quarterly
CP-112	Quarterly	Quarterly
CP-113	Quarterly	Quarterly
CP-114	Quarterly	Quarterly
CP-115	Quarterly	Quarterly
CP-115B	Quarterly**	Quarterly
CP-116	Quarterly	Quarterly
CP-117	Quarterly	Quarterly
CP-118	Quarterly	Quarterly
CP-119	Quarterly	Quarterly
CP-120	Quarterly	Quarterly
CP-122B	Quarterly**	Quarterly
MW-2*	Quarterly	Quarterly

*MW-2 or an approved substitute well

**Monitoring frequency may be adjusted to semi-annually based on the determination made in accordance with permit condition III.E.3.

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TABLE III-4: GROUNDWATER CLEAN-UP GOALS

<u>Parameter</u>	<u>Standard mg/l</u>	<u>Basis for Standard</u>
Acetone	3.5	@
Chloroform	0.006	@
Chloroethane		
Methylene chloride	0.005	MCL
1,2-Dichloroethane	0.005	MCL
1,1-Dichloroethane	3.5	@
1,1-Dichloroethene	0.007	MCL
1,2-Dichloroethene	0.005	PQL
1,1,1-Trichloroethane	0.2	MCL
1,1,2-Trichloroethane	0.005	MCL
Trichloroethene	0.005	MCL
Tetrachloroethene	0.005	MCL
Vinyl chloride	0.002	MCL
Total Phenol	21.0	MCL
4-methylphenol	0.18	@
Methyl ethyl ketone	2.0	@
Methyl isobutyl ketone	2.0	@
Benzene	0.005	MCL
Ethylbenzene	0.7	MCL
Toluene	1.0	MCL
Xylenes (total)	10.0	MCL
Total Phenol	21.0	MCL
4-methylphenol	0.18	@

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Bis(2-ethylhexyl)phthalate	0.006	MCL
Napthalene	0.7	@
2-methylnapthalene		
Acenaphthene	2.1	@
Fluorene	1.4	@
Phenanthrene		
Pyrene	10.5	@
Benzo(a)anthracene	0.05	@
Chrysene	0.0002	Proposed MCL
Benzo(b)fluoranthene	0.048	@
Benzo(k)fluoranthene	0.5	@
Benzo(a)pyrene	0.2	@
Indeno(1,2,3-cd)pyrene	0.05	@
Arsenic	0.05	MCL
Cadmium	0.005	MCL
Copper	1.3	@
Chromium	0.1	MCL
Cyanide	0.2	MCL
Lead	0.015	MCL
Mercury	0.002	MCL
Nickel	0.1	MCL
Zinc	10.5	@
PCB's	0.0005	MCL

@ Action level in July 27, 1990 Proposed Rule
for Corrective Action for Solid Waste Management

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Units at Hazardous Waste Management Facilities

MCL	Maximum Contaminant Level
PQL	Practical Quantitation Limit

only Pier 90/91? SB

discharge point

**PERMIT
FOR THE INVESTIGATION AND REMEDIATION OF RELEASES
FROM SOLID WASTE MANAGEMENT UNITS**

Washington State
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504-8711
Telephone: (206) 459-6000

United States
Environmental Protection Agency
1200 Sixth Avenue, HW-112
Seattle, Washington 98101
Telephone: (206) 553-1253

Issued in accordance with the applicable provisions of the Hazardous Waste Management Act, Chapter 70.105 RCW, and the regulations promulgated thereunder in Chapter 173-303 WAC and the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), and the regulations promulgated thereunder in Title 40 of the Code of Federal Regulations.

ISSUED TO:

Facility Operator
Burlington Environmental Inc.
Pier 91 Facility
2001 West Garfield
Seattle, Washington xxxxx
Telephone: (206) xxx-xxxx

Property Owner
Port of Seattle
Terminal 91
P.O. Box 1209
Seattle, Washington 98111
Telephone: (206) xxx-xxxx

FOR: Pier 91 Facility, EPA Identification No. WAD 00081 2917

This Permit is effective as of February 10, 1995 and shall remain in effect until February 10, 2005 unless revoked and reissued in accordance with 40 CFR 270.41 or WAC 173-303-830(3) and (5), or terminated in accordance with 40 CFR 270.43 or WAC 173-303-830(3) and (5), or continued in accordance with 40 CFR 270.51 or WAC 173-303-806(7).

ISSUED BY: WASHINGTON DEPARTMENT OF ECOLOGY and the
U.S. ENVIRONMENTAL PROTECTION AGENCY - REGION 10

Jerry Lenssen, Section Head
Hazardous Waste Permits
Department of Ecology
Agency

Randall F. Smith, Director
Hazardous Waste Division
Environmental Protection

Date _____

change CA ref to WAC

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INTRODUCTION

PERMITTEES: BURLINGTON ENVIRONMENTAL INC. and PORT OF SEATTLE
EPA/STATE IDENTIFICATION NUMBER: WAD 00081 2917

Pursuant to:

Chapter 70.105 RCW, the Hazardous Waste Management Act of 1976, as amended, and regulations codified in Washington Administrative Code (WAC) 173-303,

Solid Waste Disposal Act (42 U.S.C. 3251 et seq.) as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), and,

Regulations promulgated by the U.S. Environmental Protection Agency (EPA) codified in Title 40 of the Code of Federal Regulation (40 CFR),

a Permit is issued to both Burlington Environmental Inc., the hazardous waste facility operator, and the Port of Seattle, the property owner (hereafter called the Permittees), to conduct corrective action at the Pier 91 facility. The Pier 91 facility is located at 2001 West Garfield, Seattle, Washington, XXXXX. at latitude xx degrees xx minutes xx seconds North and longitude xxx degrees xx minutes xx seconds West.

The Permittees must comply with all terms and conditions set forth in this Permit and in Attachments xx through xx. When there is a conflict between permit condition(s) and a permit attachment, the wording of the permit condition(s) prevails. The Permittees must also comply with all applicable State regulations, including Chapter 173-303 WAC and as specified in the Permit. Additionally, the Permittees must comply with all applicable federal regulations, including 40 CFR Parts 260 through 264, Part 266, Part 268, and Part 270.

Applicable state and federal regulations are those which are in effect on the date of final administrative action of this Permit and any self-implementing statutory provisions and related regulations which, according to the requirements of RCRA (as amended), or state law, are automatically applicable to the Permittees' corrective action activities, notwithstanding the conditions of this Permit.

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This Permit is based upon the administrative record, as required by 40 CFR xxxx and WAC 173-303-840. The Permittees' failure in the application or during the Permit issuance process to fully disclose all relevant facts, or the Permittees' misrepresentation of any relevant facts at any time, shall be grounds for the termination or modification of this Permit and/or initiation of an enforcement action, including criminal proceedings. The Permittees must inform the Director and the Administrator of any deviation from permit conditions or changes in the information on which the application is based which would affect either the Permittees' ability to comply or actual compliance with the applicable regulations or permit conditions or which alters any condition of this Permit in any way.

The Department shall enforce all conditions of this Permit for which the State of Washington is authorized and all conditions which are designated in this Permit as state requirements only. Any challenges of any Permit condition that concern State requirements, (i.e., conditions of this Permit for which the State of Washington received final authorization or conditions which are designated in the Permit as state requirements only) shall be appealed to the Department in accordance with WAC 173-303-845. In the event that the Department does not maintain final authorization, the Agency will enforce all Permit conditions except those which are State-only requirements.

The Agency shall enforce all permit conditions which are based on federal regulation promulgated under HSWA, but have not yet been adopted by the State of Washington and have not been included in the state's authorized program. In such capacity, the Agency shall enforce any permit condition based on state requirements if, in the Agency's judgement, the Department should fail to enforce that permit condition, except that in no case shall the Agency enforce any permit condition designated as a State requirement only.

In the event that the State of Washington receives authorization from EPA to implement additional regulations promulgated under RCRA, as amended, the Department shall assume enforcement responsibility for existing permit conditions that are based on these requirements.

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LIST OF ATTACHMENTS

The following listed documents are hereby incorporated, in their entirety, by reference into this Permit. These incorporated attachments are enforceable conditions of this Permit, as modified by any specific permit condition.

Attachment AA	Physical description of the Pier 91 corrective action facility.
Attachment BB	Modifications to BEI draft RCRA Facility Investigation Report.

Legal-

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DEFINITIONS

All definitions contained in 40 CFR Sections 124.2, 260.10, 270.2, 264.141, and WAC 173-303-040 are hereby incorporated, in their entirety, by reference into this Permit. Any of the definitions used below, (a) through (k), shall supersede any definition of the same term given in 40 CFR Sections 124.2, 260.10, 270.2, 264.141, and WAC 173-303-040. Where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

For purposes of this joint Permit, the following definitions shall apply:

- a. The term "Permit" shall mean the joint corrective action permit issued by the Washington State Department of Ecology, pursuant to Chapter 70.105 RCW and Chapter 173-303 WAC, and by the Environmental Protection Agency, Region 10, pursuant to 42 U.S.C. 3251 et seq. and 40 CFR Parts 124 and 270.
- b. The term "Director" shall mean the Director of the Washington State Department of Ecology or a designated representative. The Section Head (with the address as specified on page one of this Permit) is a duly authorized and designated representative of the Director for purposes of this Permit.
- c. The term "Administrator" shall mean the Administrator of the U.S. Environmental Protection Agency (EPA) or a designated representative. The Director, Hazardous Waste Division, EPA Region 10, (with the address as specified on page one of this Permit), is a duly authorized and designated representative of the Administrator for purposes of this Permit.
- d. The term "Department" shall mean the Washington State Department of Ecology, (with the address as specified on page one of this Permit).
- e. The term "Agency" shall mean the U.S. Environmental Protection Agency, Region 10, (with the address as specified on page one of this Permit).

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DEFINITIONS (CONTINUED)

- f. The terms "facility" or "site" shall mean that identified in the physical description of the property. This property description is as set forth in Attachment AA of this Permit and includes the hazardous waste storage and treatment facility and all contiguous property under the control of the operator and/or property owner.
- g. The term "solid waste management unit" shall mean any discernible unit at which solid waste has been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which hazardous waste or hazardous constituents (40 CFR Part 261, Appendix 8) have been routinely and systematically released.
- h. The term "Area of Concern," shall mean a physical area or physical evidence of an area that poses some threat to human health and the environment from a release and does not otherwise meet the narrower definition of "solid waste management unit."
- i. The term "RCRA Facility Assessment" shall mean the October 17, 1994 final RCRA Facility Assessment for the Terminal 91 facility.
- j. The term "RCRA Facility Investigation" shall mean an investigation of releases of hazardous wastes and hazardous constituents from solid waste management units.
- k. The term "release" shall mean any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste or hazardous constituents.

MTCA defn?

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PART I - STANDARD CONDITIONS

I.A. Standard Permit Conditions: The Permittee shall comply with all applicable requirements of 40 CFR 270.30.

interface w/ Base print.

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as discussed?

PART II - GENERAL FACILITY CONDITIONS

- II.A. The permit attachments, listed on Pages 5 and 6 of this permit, are incorporated by reference into this Permit.
- II.B. Permit Modifications: Permit Modification will be done according to the three tiered modification system, 40 CFR 270.42 and WAC 173-303-830, and the preamble to the federal regulation (53FR37912, September 28, 1988).
- II.C. Severability *as discussed*
- II.C.1. Effect of Invalidation: The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. Invalidation of any state or federal statutory or regulatory provision which forms the basis for any condition of this Permit does not affect the validity of any other state or federal statutory or regulatory basis for said condition.
- II.C.2. Final Resolution: In the event that a condition of this Permit is stayed for any reason, the Permittees shall continue to comply with the related applicable and relevant interim status standards in 40 CFR 265 and WAC 173-303-400 until final resolution of the stayed condition unless the Administrator or Director determines compliance with the related applicable and relevant interim status standards would be technologically incompatible with compliance with other conditions of this Permit which have not been stayed.
- II.D. Compliance Not Constituting Defense: Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3007, 3008, 3013, or 7003 of RCRA (42 U.S.C. Sections 6927, 6928, 6934 and 6973), Section 104 or 107, and 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA) as amended, or any other federal or state law governing protection of public health or the environment.
- II.E. Permit Expiration and Continuation: This Permit and all conditions herein will remain in effect beyond the Permit's expiration date until final permit

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determination if the Permittee has submitted a timely, complete application (under WAC 173-303-806 and 40 CFR Section 270 Subpart B for HSWA provisions), and, through no fault of the Permittee, the Director or the Administrator have not made a final permit determination, through their respective authorities, as set forth in WAC 173-303-840 and 40 CFR 270.51 for HSWA provisions. This Permit may be reviewed 5 years after its effective date and modified, as necessary, in accordance with 40 CFR 270.41.

II.F. Reports, Notifications and Submissions: All reports, notifications or other submissions which are required by this Permit to be sent or given to the Director and/or the Administrator should be sent certified mail or given to:

Supervisor, Hazardous Waste Section
Department of Ecology
Northwest Regional Office
3190 160th Ave S.E.
Bellevue, Washington 98008-5452
Telephone: (206) 649-7000

Program Manager, Waste Management Branch
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, HW-102
Seattle, Washington 98101
Telephone: (206) 553-1253

These phone numbers and addresses may change without modification of the permit.

II.G. Documents To Be Maintained At Facility Site: Current copies of the following documents, as amended, revised, and modified, shall be maintained at the facility. These documents must be maintained until closure is complete and certified by an independent, registered professional engineer, unless a lesser time is specified in the Permit.

1. The Permit and all Attachments;
2. The facility operating record.

II.H. Waste Minimization

II.H.1. Waste Minimization Certification: In accordance with 40 CFR 264.73(b)(9), the Permittees must place a

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certification in the operating record on an annual basis that:

- a. A program is in place to reduce the volume and toxicity of hazardous waste generated to the degree determined by the Permittees to be economically practicable; and,
- b. The proposed method of treatment, storage or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

II.H.2. Biennial Report: In accordance with 40 CFR 264.75, the Permittees shall submit to the Regional Administrator, within one hundred and fifty (150) days of the effective date of the Permit and on March 1 of each even numbered year thereafter, a report documenting efforts to reduce the volume and toxicity of waste generated, including estimates of the reduction in volume or toxicity achieved since the previous report by the facility's waste minimization program certified in I.H.1.

II.I. Operating Record: The Permittees shall maintain a written operating record at the facility, consisting of records kept for the length of time specified below. The Permittees shall also record all information referenced in this Permit in the operating record within 48 hours of the information becoming available. The operating record shall include, but not be limited to, the information listed below:

- a. The following records shall be maintained until corrective action is complete and certified:
 - i. A map(s) showing the location of all solid waste management units and Areas of Concern at the facility;
 - ii. Assessment reports, as per WAC 173-303-360(2)(k), of all incidents that require implementation of the contingency plan;
 - iii. Record of spills and releases;
 - iv. Written reports and records of verbal notification to the Director and the

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Administrator to address releases, fires, and explosions;

- v. Generator reports submitted in compliance with WAC 173-303-220(1);
 - vi. Summaries of all records of corrective action;
 - vii. Copies of all other environmental permits;
 - viii. Corrective action deed notification;
 - ix. Certifications pursuant to 40 CFR 264.73(b)(9), Annual Waste Reduction Plan.
- b. The following records shall be maintained for a minimum of 5 years. This time period may be extended by the Department or Agency in the event of enforcement action:
- i. Facility operation and maintenance records and reports prepared pursuant to this Permit;
 - ii. Progress reports and any required notifications prepared pursuant to this Permit;
 - iii. The notice and certification required by a generator under 40 CFR 268.7. (Land Disposal Restrictions) prepared pursuant to this permit;
 - iv. Records of all inspection reports prepared pursuant to this permit; and,
 - v. Records required by 40 CFR 264.1064(d) and (e) for compliance with the Organic Air Emissions Standards for Equipment Leaks, 40 CFR Part 264 Subparts BB.
- c. Current copies of the following documents as amended, revised, and modified shall be maintained at the facility until closure and Corrective Action are complete and certified:
- i. Contingency Plan;
 - ii. Training Plan;

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- iii. All closure, interim measures and final corrective action cost estimates, financial assurance documents prepared pursuant to this Permit, as well as the company names and addresses of facility insurers;

II.J. Schedule Extensions: The Permittee shall notify the Department, in writing, as soon as possible of any deviations or expected deviations from any schedules of Parts I through III or Attachments AA through BB of this Permit. The Permittee shall include with the notification all information supporting its claim that it has used best efforts to meet the required schedules. For the purposes of this permit condition "best efforts" shall include, but not be limited to, performance of all activities necessary to award contract(s) at the earliest opportunity after the information necessary to award the contract(s) is available to the Permittees, adequate planning, adequate funding, adequate operator staffing, adequate laboratory and process controls, operation of a backup or auxiliary facility or similar systems by the Permittees when necessary. If the Director or the Administrator determines that the Permittee has made best efforts to meet the schedules of this Permit, the Director or the Administrator shall notify the Permittee in writing by certified mail that the Permittee has been granted an extension. Such a revision shall not require a permit modification under 40 CFR Section 270.42 and WAC 173-303-830. Copies of all letters pursuant to this Permit condition shall be kept in the Operating Record.

II.K. Organic Air Emissions: The Permittee shall comply with the requirements of 40 CFR Part 264 Subparts BB, organic air emission standards for equipment leaks. This shall include, but not be limited to, complying with the reporting requirements of 40 CFR 264.1065.

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units

PART III - CORRECTIVE ACTION

Investigations of contamination at the Pier 91 corrective action facility to date indicate contamination originating from multiple solid waste management sources. Based on the evidence of these releases as well as the potential for releases from other solid waste management units, site investigation of potential contaminant sources and remediation are necessary at the facility.

For convenience, and based on the varying extent of site characterization conducted to date for different areas of the facility, corrective action requirements are divided into four sections in this Part of the permit (Part III). The four sections consist of three specific corrective action areas and one "General" requirements section. The three specific corrective action areas are, 1) Track One: Oil Line Break, 2) Track Two: Non-TSD SWMUs and AOCs, and 3) Track Three: TSD SWMUs and AOCs.

The "General" corrective action requirements appear in permit sections III.G. through III.X. The "General" requirements are applicable to all permit corrective action activities.

The requirements for "Track One: Oil Line Break" are provided in permit sections III.A. These requirements are for investigating the release associated with SWMU #XX in the RFA.

The requirements for "Track Two: Non-TSD SWMUs and AOCs" corrective action track are provided in permit section III.B. These requirements are for investigating releases from Non-TSD SWMUs and AOCs identified in the RCRA Facility Assessment that have been determined to need further investigation as specified in Table III-5.

The requirements for the "TSD SWMUs and AOCs" corrective action track are provided in permit sections III.C. through III.G. These requirements are primarily for the remediation of contamination sourced from the TSD-leased property, but also include requirements for the investigation of releases from X SWMUs and X AOCs located on or adjacent to the TSD-leased property, as identified in Table III-5.

SWMUs identified in the RFA and in Table III-5 are loosely categorized by their location relative to the present day operator of that location and do not, nor are meant to, ascribe corrective action responsibility.

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III.A. TRACK ONE: INVESTIGATION OF OIL LINE BREAK

III.A.1. RCRA Facility Investigation (RFI) Workplan: Permittees must submit a draft and final RCRA Facility Investigation Workplan in accordance with the requirements of permit condition III.K. for the oil line break, identified as SWMU #XX in the RCRA Facility Assessment and Table III-5. The draft RFI workplan must be submitted in accordance with the schedule contained in Table III-1. In addition to the requirements of permit condition III.K., the workplans must include the following:

a) monitoring of wells EW-1, MW-2, MW-3 MW-102, MW-103, MW-6, and all short-fill water table wells for the presence of LNAPL, and,

b) monitoring for dissolved total petroleum hydrocarbons in any of the wells sampled in accordance with permit condition III.A.1.a., above, that have measurable levels of LNAPL, and,

c) a soils investigation plan to determine the extent of hydrocarbon contamination of the soils from this SWMU.

III.A.2. RFI Report: The Permittees shall submit draft and final RFI Reports in accordance with permit condition III.K. The draft RFI Report shall be submitted in accordance with the schedule contained in Table III-1.

III.A.3. Additional Investigation: If based on the information provided in the RFI Report required above in permit condition III.A.2., the Administrator or Director determine additional investigation is necessary, the Permittees will repeat the requirements of permit conditions III.A.1. (with the exception that the requirements of III.A.1.a.-III.A.1.c. need not be included) and III.A.2. This process of RFI investigating and reporting shall be continued until the Director or Adminisistrator determines one of the following: a) no further action is necessary, b) adequate mitigation activities have been implemented in accordance with permit condition III.I. (stabilization actions), or, c) a remediation workplan is required in accordance with permit condition III.A.4. Such a determination by the Director or Administrator and submission of subsequent work products shall not require permit modification.

*data from
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rec'd*

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III.A.4. Remediation Workplan: The Permittees shall prepare draft and final remediation workplans in accordance with permit condition III.L. for the remediation of contaminated media associated with releases investigated under permit condition III.A. The draft and final workplans shall be submitted in accordance with the schedule provided in Table III-1 unless the Director or Administrator approves a schedule extension based on the Permittees having conducted adequate stabilization activities in accordance with permit condition III.I. Upon submittal of the final remediation workplan, the Permittees shall request a permit modification in accordance with permit condition II.B. *if necessary*
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Specify
III.B. **TRACK TWO: NON-TSD SWMU AND AOC CORRECTIVE ACTION**

Note: Permit Section III.B. is corrective action requirements specific to releases from SWMUs and AOCs identified in Table III-5 as requiring "RFI--Non-TSD Track." These SWMUs and AOCs are referred to as "Non-TSD" units to distinguish them from the units that are being addressed under track three, TSD corrective action.

III.B.1. RCRA Facility Investigation (RFI) Workplan: Permittees must submit a draft and final RCRA Facility Investigation Workplan in accordance with the requirements of permit condition III.K. for the "Non-TSD" SWMUs and AOCs identified in Table III-5 as requiring further investigation. The draft RFI workplan must be submitted in accordance with the schedule contained in Table III-1.

III.B.2. RFI Report: The Permittees shall submit draft and final RFI Reports in accordance with permit condition III.K. The draft RFI Report shall be submitted in accordance with the schedule contained in Table III-1.

III.B.3. Additional Investigation: If based on the information provided in the RFI Report required above in permit condition III.B.2., the Administrator or Director determines additional investigation is necessary, the Permittees will repeat the requirements of permit conditions III.B.1. and III.B.2. This process of RFI investigating and reporting shall be continued until the Director or Administrator determines one of the following: a) no further action is necessary, b) adequate mitigation activities have been implemented in accordance with permit condition III.I. (stabilization

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actions), or, c) a remediation workplan is required in accordance with permit condition III.B.4. Such a determination by the Director or Administrator and submission of subsequent work products shall not require permit modification.

III.B.4. Remediation Workplan: The Permittees shall prepare draft and final remediation workplans in accordance with permit conditions III.L. through III.N. for the remediation of contaminated media associated with releases investigated under permit condition III.B. The draft and final workplans shall be submitted in accordance with the schedule contained in Table III-1 unless the Director or Administrator approves a schedule extension request based on the Permittees having conducted adequate stabilization activities in accordance with permit condition III.I. Upon submittal of the final remediation workplan, the Permittees shall request a permit modification in accordance with permit condition II.B.

III.C.-III.G. TRACK THREE: TSD SWMU AND AOC CORRECTIVE ACTION

Note: Permit sections III.C-III.G. are corrective action requirements specific to releases or potential releases from SWMUs and AOCs identified in Table III-5 as requiring either, 1) RFI--TSD Track, or 2) Remediation--TSD Track.

III.C. Interim Measures

III.C.1. Draft Interim Measures Report: Unless the interim measures workplan, approved September xx, 1994 in accordance with the XXXX RCRA 3008(h) Order, is incorporated into the final remediation workplan approved under III.D.2., the Permittees must submit, in accordance with the schedule provided in Table III-1, a draft report demonstrating completion of stabilization activities and including the following information:

- Copy sent?*
- a) Estimates of amounts of groundwater treated or removed;
 - b) Estimates of amounts of product recovered;
 - c) Procedures for closing the interim measures system.

III.C.2. Final Interim Measures Report: If Permittees submit a draft interim measures report in accordance with permit condition III.C.2. above, the Permittees shall submit a final report after the Director or Administrator's

III.C.1

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approval of the draft Interim Measures Report, which may require report modification based on comments received from the Director or Administrator. Such approval and report modification shall not require permit modification. The Permittees shall submit the final Interim Measures Report in accordance with the schedule provided in TABLE iii-1.

III.D. Remediation of Already Investigated TSD Contamination

III.D.1. Finalization of Pre-Permit RFI Report: Based on comments to the August xx, 1993 "draft RCRA Facility Investigation," contained in Attachment BB of this permit, the Permittees shall submit a final RFI Report in accordance with the schedule provided in Table III-1. Such report modification and report submittal shall not require permit modification.

III.D.2. Remediation Workplan: The Permittees shall prepare draft and final remediation workplans in accordance with permit condition III.L. for the remediation of contaminated media from releases reported in accordance with permit condition III.D.1., unless the Director or Administrator approves a schedule extension request based on the Permittees having conducted adequate stabilization activities in accordance with plans approved in accordance with permit condition III.I. The draft and final workplans shall be submitted in accordance with the schedule provided in Table III-1. Upon submittal of the final remediation workplan, the Permittees shall request a permit modification in accordance with permit condition II.B.

III.E.-III.F. Continued TSD Investigation and Potential Remediation

III.E.1. New Well: In accordance with the schedule contained in Table III-1, the Permittees shall install and develop a well in the lower aquifer along the west side of the BEI leased property, approximately mid-way between wells 103B and 104B in accordance with the procedures approved under BEI's 1992 RFI Workplan or alternatively, as specified in a ground water well installation and development plan submitted thirty (30) days prior to the scheduled date of installation and approved by the Director or Administrator.

III.E.2. Sampling of New Well: Upon completion of installation and development of the new lower aquifer ground water well required in accordance with permit condition

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III.E.1., above, the Permittees shall sample and analyze the new well in accordance with the next scheduled sampling event.

- III.E.3. For the first two quarters of sampling after installation of the new lower aquifer well in accordance with permit condition III.E.1., sampling of the lower aquifer wells in accordance with this permit condition shall not be performed in conjunction with any other well sampling. If, based on the sampling results of these two quarters of data plus any other lower aquifer well analytical results from the pre-corrective action sampling program, the Administrator or Director determines that analytical results justify a lower sampling frequency, then the Administrator or Director may make a written determination to lower the sampling frequency of the lower aquifer wells from quarterly to semi-annually. Such a written determination, and any subsequent reduction in sampling frequency shall not require a permit modification.
- III.E.4. New RFI Workplan: Permittees must submit a draft and final RCRA Facility Investigation Workplan in accordance with the requirements of permit condition III.K. for the TSD SWMUs and AOCs identified in Table III-5 as requiring further investigation. The draft and final RFI workplans must be submitted in accordance with the schedule contained in Table III-1.
- III.E.5. RFI Report: The Permittees shall submit draft and final RFI Reports in accordance with permit condition III.K. The draft RFI Report shall be submitted in accordance with the schedule contained in Table III-1.
- III.E.6. Additional Investigation: If based on the information provided in the RFI Report required above in permit condition III.E.5., the Administrator or Director determine additional investigation is necessary, the Permittees will repeat the requirements of permit conditions III.E.3. and III.E.4. This process of RFI investigating and reporting shall be continued until the Director or Administrator determine that 1) no further action is necessary, b) adequate mitigation activities have been implemented in accordance with permit condition III.I. (stabilization actions), 3) final disposition of the SWMU or AOC can be managed in accordance with facility closure, or, 4) a remediation workplan in accordance with III.F. is required. Such a determination by the Director or Administrator and

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submission of subsequent work products shall not require permit modification.

III.F. Remediation Workplan: The Permittees shall prepare draft and final remediation workplans in accordance with permit condition III.L. for the remediation of contaminated media from releases investigated in accordance with permit condition III.E., above, unless the Director or Administrator approves a schedule extension request based on the Permittees having conducted adequate stabilization activities in accordance with plans approved in accordance with permit condition III.I. The draft and final workplans shall be submitted in accordance with the schedule provided in Table III-1. Upon submittal of the final remediation workplan, the Permittees shall request a permit modification in accordance with permit condition II.B. In addition to the requirements in permit conditions III.L., the remediation workplan must include the following:

good
a) Monitoring wells MW-39-3, CP-103A, CP-104A, CP-107, CP-110, CP-113, W-10, CP-116, CP-1117, CP-118, and CP-119, at a minimum, must be within the design of the remediation system's capture zone; and,

required
b) A plan for conducting a pump test, if well pumping is included in the remediation workplan. The pump test plan must be designed to estimate, 1) pumping rates, 2) treatment capacity, 3) vertical hydraulic conductivities, and 4) expected contaminant levels. *for capture purpose*

III.G.-III.X. GENERAL CORRECTIVE ACTION REQUIREMENTS

Note: Sections III.G.-III.X. are Applicable to All Corrective Action

III.G. General Requirements

III.G.1. In the event any permit condition in Part III of this permit is in conflict with any provisions in the approved workplans submitted in accordance with Part III of this permit, the permit condition shall be the applicable requirement.

III.G.2. In accordance with Section 3004(u) of RCRA and the regulations promulgated pursuant thereto, the Permittees must institute Corrective Action as

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necessary to protect human health and the environment for all releases of hazardous waste(s) or hazardous constituent(s) from any solid waste management units (SWMU's) at the facility, regardless of the time at which waste was placed in such units. Based on the available data regarding the levels and extent of contamination at the facility, EPA has determined the need for investigation and remediation at the facility.

- III.G.3. In accordance with Section 3004(v) of RCRA and the regulations promulgated pursuant thereto, the Permittees must implement Corrective Action(s) beyond the facility property boundary, where necessary to protect human health and the environment.
- III.G.4. In accordance with 40 CFR 270.32(b)(2), the Administrator has made the determination to include conditions in the permit to address corrective action as necessary to protect human health and the environment for those Areas of Concern (AOCs) identified in Table III-5 as requiring further action. This determination is based on the information contained in the RCRA Facility Assessment and the Administrative Record.
- III.G.5. Nothing in this permit shall limit the Agencies' authority to undertake, or require any person to undertake, response action or corrective action under any law, including (but not limited to): Sections 104 or 106 of CERCLA (42 USC Sections 9604 or 9606), and Section 7003 of RCRA (42 USC Section 6973). Nor shall any permit condition relieve the Permittees of any obligations under any law, including (but not limited to) Section 1103 of CERCLA, to report releases of hazardous wastes, constituents, or substances to, at, or from the facility.
- III.G.6. All plans, reports, and schedules required by the terms of this Permit are, upon approval by the Agencies, incorporated into this Permit. Any noncompliance with such approved plans, reports, and schedules shall be considered noncompliance with this permit.
- III.G.7. Failure to submit the information required in this Permit, or falsification of any submitted information is grounds for termination of the permit. All information submitted must be certified, as required by 40 CFR 270.11(d).

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III.G.8. In the event that the Agencies disapprove of any plan, report, or schedule required by this Permit, and approval of the submittal as specified in this Permit does not require a permit modification under WAC-173-303-830 or 40 CFR 270.41, either the Agencies or the Permittees may initiate the dispute resolution process specified in Permit Condition III.W. Under this permit condition each plan, report, and schedule shall be considered separately.

III.G.9. Equivalent Materials and Methods: If certain equipment, materials, and methods are specified in this Part (Part III), the Permittees are allowed to use equivalent or superior equipment, materials, or methods. Use of such substantially equivalent or superior items shall not be considered a modification of the Permit, but the Permittees must place in the Operating Record such a revision, accompanied by a narrative explanation, and the date the revision became effective. The Agencies may judge the soundness of the Permittees' determination during inspections of the facility, or in responses to facility submittals, and take appropriate action.

III.H. RFI and CMS Progress Reports: Permittees shall submit progress reports on all RFI and Remediation work to the Director and Administrator within 6 months of the effective date of this permit and every 6 months thereafter. Each progress report shall contain the following information:

- a) A description and estimate of the work completed;
- b) Summaries of all findings;
- c) Summaries of all problems encountered during the reporting period;
- d) Actions taken to rectify problems; and,
- e) Projected work for the next reporting period.

III.I. Stabilization Actions

III.I.1. Based upon the Director or Administrator's determination of the need for stabilization actions, the Permittees shall submit to the Director or Administrator either a justification in accordance with III.I.1.a. for why stabilization actions are

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unnecessary or, alternatively, a draft stabilization actions workplan in accordance with III.I.1.b.

a) Provide a justification for why stabilization actions are unnecessary at the facility based on the schedule for final remediation, and responses to the questions contained in Attachment NN. In responding to the questions in attachment NN, particular consideration must be given to the potential for releases to Lake Jacob and Puget Sound.

b) The stabilization actions workplan shall, at a minimum, include the following:

i) A proposal and justification for the design, construction, operating procedures, inspection, and maintenance of the stabilization system to address areas of contamination identified by the Administrator or Director;

ii) A summary of all relevant monitoring data and qualitative information about the proposed locations for interim measures;

iii) A data collection and management plan for obtaining and reporting quality assured results of system performance;

iv) Performance goals that will determine the extent of the stabilization measures;

v) A content description and submittal schedule for progress and final reports; and,

vi) A schedule for the initiation and completion of plan activities.

III.I.2. Final Justification or Stabilization Action Workplan:

After the Director or Administrator or Director's approval, which may require the justification submitted under III.I.1.a. or the workplan submitted under III.I.1.b. to be modified, the final stabilization measures justification or stabilization action workplan shall be submitted by the Permittees in accordance with the schedule provided in writing by the Director or Administrator. Such approval or modification shall not require a permit modification.

III.I.3. If the Director or Administrator approves a Stabilization Action Workplan in accordance with permit

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condition III.I.2., the Permittees shall complete the tasks of the workplan in accordance with its terms and schedule.

III.J. Pre-Remediation Monitoring

III.J.1. Draft Pre-Remediation Monitoring Plan: The Permittees shall submit to the Director or Administrator in accordance with the schedule contained in Table III-1 of this permit a draft plan for monitoring of the groundwater until the implementation of the groundwater remediation monitoring program. At a minimum, this plan shall include the following:

a) Monitoring of the wells listed in Table III-2 at the sampling frequencies listed in Table III-2;

b) A listing of monitoring constituents that includes the clean-up goal constituents contained in Table III-4;

c) Program operation requirements in accordance with permit condition III.O.;

d) Well construction, maintenance, and replacement requirements in accordance with permit condition III.R.; and,

e) A schedule for the initiation and completion of all tasks described in the plan.

III.J.2. Final Pre-Remediation Monitoring Plan: ~~After the Director or Administrator's approval, which may require the plan to be modified, a final Pre-Corrective Action Monitoring Plan shall be submitted by the Permittees in accordance with the schedule provided in writing by the Director or Administrator. Such approval and plan modification shall not require a permit modification.~~

III.J.3. Upon approval by the Director or Administrator of the monitoring plan required in accordance with III.J.2., the Permittees shall complete the tasks described in the monitoring plan in accordance with its terms and schedules.

III.J.4. Modification to Pre-Remediation Monitoring Plan: As site investigation and remediation proceed, the need to modify the list of pre-remediation monitoring wells may become necessary. The Permittees may add additional

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moving wells?

wells to the monitoring list without the need for a permit modification. To remove wells from the pre-remediation monitoring list, the Permittees must submit a permit modification in accordance with permit condition II.B.

III.K. RFI Process

III.K.1. RFI Workplan Contents: Draft RFI Workplans, must at a minimum include the following:

*environmental
setting - start
hydro, etc.*

a) Plans to investigate the nature, extent, direction, rate, movement, and concentration of releases from SWMUs and AOCs as appropriate;

b) a brief justification for investigation approach selected for each SWMU or AOC;

c) quality assurance/quality control plans for all site investigation work consistent with State/EPA guidance;

d) terms and schedule for completing RFI tasks.

III.K.2. Final RFI Workplans: After the Director or Administrator's approval of the Draft RFI Workplans, which may require workplan modification, final RFI Workplans must be submitted by the Permittees in accordance with the schedule provided in writing by the Director or Administrator. Such approval and workplan ~~modification shall not require permit modification.~~ Upon the Director or Administrator's approval, the Permittees must complete the tasks outlined in the RFI Workplans in accordance with the RFI Workplans' terms and schedule.

*of what?
of workplan*

III.K.3. Amendments to RFI Workplans: Amendments to final RFI Workplans may become necessary due to the discovery of new information obtained in the course of the RFI investigations. The Permittees shall submit such workplan amendments to the Director or Administrator for approval. If the Permittees do not submit a workplan amendment within 60 days of receipt of new information, the Director or Administrator may initiate a permit modification pursuant to permit condition II.B. Such approval of submitted workplan amendments and any necessary workplan modification required by the Director or Administrator shall not require a permit modification.

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together*

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III.K.4. RFI Workplan Amendment Approval: Upon final approval of any workplan amendment or permit modification made in accordance with permit condition III.K.3. above, the Permittees shall complete the tasks outlined in the workplan amendment or permit modification in accordance with their respective terms and schedules.

III.K.5. Draft RFI Reports: Draft RFI Reports, at a minimum, shall:

a) incorporate all relevant information from previous investigations as well as summarize and evaluate all data collected in accordance with the applicable RFI;

b) based on the investigation results discuss conclusions and suggestions for next steps of investigation.

III.K.6. Final RFI Reports: After the Director or Administrator's approval, which may require report modification, final RFI reports shall be submitted by the Permittees in accordance with the schedule provided in writing by the Director or Administrator. Such approval and report modification shall not require permit modification.

III.L. Remediation

III.L.1. Draft Remediation Workplans: Draft remediation workplans must, at a minimum, meet the following requirements:

a) contain plans for the design, construction, operation, inspection, maintenance, and repair of a remediation system;

b) Must address applicable local, State and Federal regulatory requirements;

c) Must provide source control to minimize the continued transport of contaminants;

d) Must be capable of remediating media contaminated by identified releases from the facility to obtain performance and clean-up goals.

e) Include the clean-up goals in Table III-4, or the most recent EPA published health-based criteria, or the most recent Model Toxics Control Act standards in

*distinct
part of
current
data
summarize
previous data &
integrate RFI
data.*

a reference?

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WAC 173-340-700
accordance with ~~WAC xx.xx~~ for establishing and
maintaining the capture zone;

remediation →
f) Must include a schedule for determining final clean-up standards that are protective of human health and the environment;

g) Must include a remediation groundwater monitoring plan in accordance with permit condition III.M., unless the Administrator or Director determine groundwater monitoring is not appropriate;

h) Must include a groundwater compliance monitoring (monitoring of groundwater after clean-up standards have been achieved) plan in accordance with permit condition III.N., unless the Administrator or Director determine ground water monitoring is not appropriate;

i) Must include a project schedule for initiation and completion of tasks contained in the plan. Remediation actions may be phased if source control and plume capture are given first priority; and,

j) Must meet the following criteria:

7/2/94
i) the performance, reliability, ease of implementation, and safety of the proposed remediation system shall be demonstrated by laboratory bench scale studies or by methods determined by the Director or Administrator to be equivalent;

volume (toxicity)
ii) the proposed remediation system must examine practicable means to minimize the direct transfer of contamination from the soil or groundwater to another media and to permanently reduce the overall degree of risk by the use of destruction or treatment;

iii) the remediation system posing the least adverse impact to the environment and providing destruction of contaminants as opposed to simply removal of contaminants, will be favored.

k) Must comply with the standards for management of waste generated by the remediation activities.

III.L.2. Final Remediation Workplan: Upon final approval of the Remediation Workplan, the Permittees shall implement

draft?

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the Remediation Workplan in accordance with the terms and schedule of the approved workplan.

more flex. what about op. charges? eg. mlt.
III.L.3.

Modification of Final Remediation Workplan:

Modifications to the final remediation workplan for additional additional work based on further contaminant migration or a determination of need for remediation of additional areas shall not require a permit modification.

III.M. Groundwater Remediation Monitoring (As required in accordance with III.L.1.)

III.M.1. Groundwater Remediation Monitoring Plan: The remediation monitoring plan required by permit condition III.L.1.g. must include plans to design, construct, operate, maintain, inspect, and repair a groundwater monitoring system capable of monitoring the effectiveness of the remediation system and must include, at a minimum, the following additional requirements: *to close*

a) Designated monitoring locations providing a sufficient number of wells, installed at appropriate locations and depths, to yield samples that represent the quality of groundwater which have been impacted by the facility;

b) Sufficient wells to demonstrate reversal of contaminant flow within the capture zone;

c) The monitoring wells and monitoring frequencies listed in Table III-3;

d) Designated monitoring constituents that include the clean-up goals, *const.* listed in Table III-4;

e) The program operation requirements in accordance with permit condition III.O.;

f) The data evaluation requirements in accordance with permit condition III.P.;

g) The well construction, maintenance and replacement requirements in accordance with permit condition III.R.; and,

h) Project schedule for conducting activities including submittal of quality assured sampling results.

at least use perf. goals.

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August 15, 1989
R10.2500.1
R10 Ground-water Data Management
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III.N. Compliance Monitoring (As required in accordance with III.L.1.h. and established to monitor ground water after clean-up standards have been achieved) *Ⓟ*

III.N.1. Compliance Monitoring Plan: The compliance monitoring plan required by permit condition III.L.1.h. must, at a minimum include the following:

to close
a) plans to design, construct, operate, maintain, inspect, and repair a groundwater compliance monitoring system capable of yielding samples that represent the quality of groundwater which would be impacted by the migration of contamination from the facility in the groundwater;

b) Sufficient wells to demonstrate that the groundwater is in compliance with the established clean-up standards established;

c) Designated monitoring well locations and monitoring frequencies;

d) Designated monitoring constituents including the clean-up standard constituents listed in Table III-4;

e) The program operation requirements in accordance with permit condition III.O.;

f) The data evaluation requirements in accordance with permit condition III.Q.; and,

g) The well construction, maintenance, and replacement requirements in accordance with permit condition III.R.

III.O. Program Operation (as required in accordance with III.J., III.M., and III.N.)

Revised
III.O.1. The Permittees shall use the techniques and procedures specified in the most recent edition of EPA SW-846, Test Methods for Evaluating Solid Waste, and well sampling procedures in accordance with the RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, and sampling plans as approved under Part III of this permit when collecting, preserving, shipping, analyzing, tracking and controlling samples required by Part III of this permit.

III.O.2. The Permittees shall obtain water level elevation measurements from each monitoring well specified in the

RCRA GW Monitoring Draft
Technical
Guidance
530-R-93-001
PB93-
139350
Nov-1992

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When chem samples are taken, are they? Or for prep?

plan. Measurements for each monitoring well shall be obtained prior to purging of the well. In order to minimize the potential for error caused by temporal variations, the Permittees shall obtain all water level elevation measurements within as short a time period as possible, not to exceed one working day.

may be less for fielding.

The Permittees shall use these data to determine the rate and direction of groundwater flow at least annually for the periods of high and low water table elevation. The resultant contour maps and flow rates shall be submitted to the Director or Administrator by the anniversary date of this permit of each year. The Permittees shall submit, with the contour maps, a written review of the adequacy of the groundwater monitoring system to detect contaminant movement relative to observed groundwater flow directions.

and propose any approp changes permit mod?

III.O.3. Quality assured results of analyses, including laboratory detection limits achieved for each constituent, shall be submitted to the Director or Administrator within thirty (30) calendar days of the Permittees' receipt of results from the laboratory. In no case shall the period between the date of sampling and the date of submission of analytical results exceed ninety (90) calendar days unless an extension is granted by the Director or Administrator.

Specify intervals of past results to be considered & number of GPP IX samples to be taken per selection

III.O.4. The Permittees shall annually analyze a groundwater sample from one well, selected by the Permittees, for all 40 CFR 264 Appendix IX constituents. The well selected by the Permittees requires the approval of the Director or Administrator. Selection and approval of the monitoring well identified for 40 CFR 264 Appendix IX monitoring shall not require a permit modification. Selection and approval of the monitoring well shall be based on location and the number and levels of contaminants detected at the proposed well location. The Permittees shall submit the results of this analysis to the Director or Administrator within thirty (30) calendar days of the Permittee's receipt of results from the laboratory. In no case shall the period between the date of sampling and the date of submission of analytical results exceed ninety (90) calendar days unless an extension is granted by the Director or Administrator.

III.O.5. For any constituent(s) detected under permit condition III.O.4. that is not included in the monitoring program

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currently in effect under the permit, the Permittees shall:

- Tricky - may be as other list is direct*
- a. Add the newly detected constituent(s) to the list of monitoring constituents, and provide the Director or Administrator with a copy of the revised list for inclusion into the permit within forty-five (45) days of determining that a change to the monitoring list is required. Such modification to the constituent monitoring list will not require a permit modification; or,
 - b. Submit a report justifying why the detected constituent(s) should not be included in the monitoring program. If the Director or Administrator does not accept the Permittees' justification, the Permittee shall add the constituent to the monitoring list in accordance with III.0.5.a. If the Director or Administrator accepts the justification, the constituent does not have to be added to the list of monitoring constituents; or,
 - c. Submit a notice that the Permittees have resampled and are repeating the analysis for the newly detected constituent(s). Within thirty (30) calendar days of the Permittees' receipt of results of the second analysis, the Permittees shall submit the results of the second analysis and either add the newly detected constituent(s) to the list of monitoring constituents pursuant to III.0.5.a., or submit a report justifying why the detected constituent(s) should not be included in the monitoring program pursuant to III.0.5.a.

III.0.6. For any constituent(s) added to the list of ground water monitoring constituents in accordance with permit condition III.0.5.a. above, a clean-up goal for that constituent(s) will be determined and added to the table of clean-up goals under this permit. The permittees shall calculate the clean-up goal using the formula in the footnote to Table III-4 and submit to the administrator a revised table of clean-up standards including the new constituent(s) for inclusion into the permit within forty-five (45) days of determining that a new constituent must be added to the list of monitoring constituents. Such modification to the list of clean-up goals will not require a permit modification.

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- III.O.7. The Permittees shall enter all monitoring, testing, and analytical data obtained pursuant to this permit in the operating record in accordance with permit condition II.I.

In addition, all monitoring, testing, and analytical data obtained pursuant to this permit shall be submitted to EPA Region 10 in digital data files on computer diskette (or other mutually agreeable magnetic media, such as cartridge tape). These data files shall be formatted in accordance with instructions provided by EPA Region 10 Data Management Staff.

Regional order

- III.P. Data Evaluation for Remediation Monitoring (as required in accordance with III.P.1.)

- III.P.1. Within 12 months of the start-up of the ground water remediation system and annually thereafter while groundwater remediation monitoring plan is in effect, the Permittees must submit to the Director or Administrator a demonstration that adequate progress is being made towards meeting the clean-up standards established under the permit or, if the Permittee cannot demonstrate that adequate progress is being made, the Permittees must submit a permit modification request to more effectively meet the clean-up standards established under this permit and a schedule for implementing the plan. This permit modification request will be processed within the administrative requirements of 40 CFR 270.42.

For the purposes of this permit condition the term "adequate progress" shall be defined as:

a) In compliance with the objectives of containment and capture of contaminated groundwater required in accordance with permit condition III.L.; and,

b) A showing that each well in the approved groundwater monitoring plan is either in compliance with the clean-up standards established under this permit, or exhibits a continuing decline in the concentration of those constituents above the clean-up standard. This decline shall be demonstrated by a negative slope for the best fit line among the constituent concentration levels of the previous eight (8) consecutive quarterly sampling event results for each constituent above the clean-up standard for that monitoring well.

Does this condition start @ first assurance using old data or is it effective from 1st 8 rounds.

including QA/QC

PAP

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III.P.2. After the Permittees has determined that the clean-up standards established in permit condition III.D.2. have been met for four (4) consecutive quarterly sampling events for all parameters at all monitoring points under the approved remediation workplan, the Permittees shall:

a) Notify the Director or Administrator in writing within 30 calendar days of making this determination;

b) Cease operation of the approved remediation system;

c) Implement the approved compliance monitoring plan; and,

d) Maintain the approved remediation workplan system in readiness for restarting.

III.Q. Data Evaluation for Compliance Monitoring (as required in accordance with III.L.1.)

III.Q.1. The groundwater data obtained in accordance with the compliance monitoring plan shall be compared to the established clean-up standards. Any constituent equal to or above the clean-up standard will be considered an indication of contamination. Any constituent less than the clean-up standard will be considered to be in compliance with that standard.

III.Q.2. Upon ~~detection of constituents~~ in any monitoring well exceeding the clean-up standards established under this permit, the Permittees shall:

a) Notify the Director or Administrator of this finding, in writing, within seven (7) calendar days; and,

b) Immediately collect two (2) samples from any affected well(s), purging the well(s) between samples, and reanalyze both samples for all constituents with clean-up standards established in this permit.

III.Q.3. If analytical results from:

a) Neither verification sample described in permit condition III.Q.2.b. confirm the detection of constituents above the clean-up standards, the Permittees shall resume compliance monitoring according to the established schedule and notify the Director or

*/any
contingency
for testing*

concentr.

at levels

*(if what?
receiving data
from lab?)*

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Administrator that the compliance monitoring program is being resumed;

b) Only one of the verification samples described in permit condition III.Q.2.b. confirms the detection of constituents above the clean-up standards, the Permittees shall repeat the verification procedure which begins in permit condition III.Q.2.;

c) Both verification samples described in permit condition III.Q.2.b. confirm the detection of constituents above the clean-up standards, the Permittees shall:

i) Re-implement the approved remediation workplan system within 90 days; or,

ii) Submit to the Director or Administrator, within seven (7) calendar days, notice that the Permittees intend to demonstrate that an off-site source caused the increase. A report of this demonstration shall be made within ninety (90) calendar days. If necessary, an application for a permit modification to make any appropriate changes to the compliance monitoring program shall be submitted with the report; and,

iii) Continue to monitor in accordance with the approved compliance monitoring program in effect.

*Subject to
III.P.2*
III.Q.4. If, as determined by the Director or Administrator, the notice submitted in accordance with permit condition III.Q.3.c.ii. fails to identify any off-site source of contamination, then the Permittees shall re-implement the approved remediation workplan within 60 days. If the Director or Administrator approves the notice, then the Permittees shall continue to monitor in accordance with the approved compliance monitoring program.

III.Q.5. If sampling results remain below the ~~clean-up~~ standards for three (3) years or twelve consecutive quarterly sampling events (whichever is more) after the approved Remediation Workplan system has ceased to operate in accordance with permit condition III.P.2., the Permittees may implement the approved closure plan for the remediation workplan system. The Permittees shall notify the Director or Administrator in writing after the eighth consecutive quarterly sampling event that it intends to discontinue the compliance monitoring program after four (4) additional quarterly sampling *closure required?*

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events if the levels continue to be in compliance with the established clean-up standards.

This three (3) year compliance monitoring period shall begin anew each time the remediation workplan system is de-activated in accordance with III.P.2.

III.R. Well Construction, Maintenance, and Replacement (as required in accordance with permit conditions III.J., III.M., and III.N.)

III.R.1. The Permittees shall maintain all monitoring wells in good working order, making necessary repairs in a timely manner so that the sampling program is not hindered or delayed in any way. The Permittee shall maintain an adequate supply of replacement parts and repair equipment as necessary to ensure that each sampling event proceeds on schedule.

III.R.2. Visual evidence of damage to or deterioration of wells, and complete records of all well maintenance activities, must be noted in the operating record.

III.R.3. The Permittees shall maintain borehole integrity of each monitoring well, using one of the methods designated in permit conditions III.R.3.a., III.R.3.b., or III.R.3.c., consistently using the same method for each well.

a) For any existing monitoring well, the Permittees shall calculate the specific capacity of that well during the first sampling event after the effective date of this permit. The specific capacity shall then be recalculated for that well on a biennial basis during the term of this permit. If, at any time, the specific capacity of that well decreases by more than twenty percent (20%) of the original calculated value, that well shall be redeveloped to within five percent (5%) of the original specific capacity.

For any well installed during the term of this permit, the Permittees shall calculate the specific capacity during the first sampling event for which that well is available for sampling. The recalculation and redevelopment criteria, as specified above for existing wells, shall then be followed by the Permittees; or,

b) The well shall be sounded on an annual basis. If the well has a build up of one (1.0) foot or more of

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sediment at the bottom, the well shall be redeveloped and the sediment removed; or,

c) For any existing monitoring well, the Permittees shall perform a slug test on the well to determine the hydraulic conductivity of the well during the first sampling event after the effective date of this permit. A slug test shall then be performed on the well on a biennial basis using the same slug test method. If the hydraulic conductivity determined by this method decreases by twenty percent (20%) or greater from the original value, that well shall be redeveloped to within five percent (5%) of the original hydraulic conductivity.

For any well installed during the term of this permit, the Permittees shall perform a slug test to determine the hydraulic conductivity during the first sampling event for which that well is available for sampling. The re-performance of the slug test and the redevelopment criteria, as specified above for existing wells, shall then be followed by the Permittee.

III.R.4. If a monitoring well must be decommissioned and replaced for any reason during the term of this permit, it shall be replaced prior to the next scheduled sampling event. Prior to decommissioning, the Permittees shall give notice in writing to the Director or Administrator of the rationale for the decision.

The replacement well shall be installed as close as practicable to the well being replaced. The Permittees shall provide information regarding the new well in the operating record and to the Director or Administrator as specified by permit conditions III.R.6. and III.R.7.

The Permittees shall close each well being replaced no later than ninety (90) calendar days after installation of the replacement well. Unless samples from that well have been at or below the clean-up standards specified in this permit for three (3) consecutive years, closure for wells that are not separated from the contaminated zones by a well-defined aquitard (defined below) shall be accomplished by pulling the casing or drilling out the casing and screen, redrilling the borehole, and backfilling the entire depth of the borehole with a three to five percent (3% - 5%) bentonite and cement grout, using a tremie pipe. With prior EPA approval, wells that are separated from the contaminated zones by a continuous, well-defined aquitard can be abandoned by

*WAC 173-160
may override*

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having their casings ripped below the seal, to destroy the screen and filter pack, and then be pressure grouted from the bottom up. Equivalent or superior methods may be substituted upon written approval of such substitution by the Director or Administrator. Such substitution and approval will not require a permit modification.

III.R.5. Minor deviations from the abandonment procedures specified in III.R.4. deemed necessary by the Permittees due to unforeseen events in the field at the time of well abandonment shall not be considered a modification of this permit. The Permittee shall place a notation of such a deviation, accompanied by a narrative explanation, in the operating record. The Director or Administrator may judge the soundness of this determination during inspections of the facility and take appropriate action.

III.R.6. Inspection of drilling and well construction of any new or replacement monitoring well shall be performed by a qualified geologist. The geologist shall construct and maintain a detailed log of each well describing the geologic strata encountered during drilling. The logs and descriptions shall include:

- 173-160 again, wnc
- (a) Date and time of construction;
 - (b) Drilling method and any fluid used;
 - (c) Well location (surveyed to within 0.5 feet);
 - (d) Borehole diameter and well casing diameter;
 - (e) Well depth (to within 0.1 feet);
 - (f) Drilling logs and lithologic logs from the field, including a description of soil or rock types, color, weathering, texture, structure, and fractures;
 - (g) Casing materials;
 - (h) Screen material and design, including screen length and slot size;
 - (i) Casing and screen joint type;
 - (j) Filter pack material, including size and placement method and approximate volume;
 - (k) Composition and approximate volume of sealant material and method of placement;
 - (l) Surface seal design and construction;
 - (m) Well development procedures;
 - (n) Ground surface elevation (to within 0.01 feet);
 - (o) Top of casing elevation (to within 0.01 feet); and,
 - (p) Detailed drawing of well, including dimensions.

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III.R.7. The Permittees shall submit the logs and descriptions obtained pursuant to permit condition III.R.6., as-built drawings, and location information of the new well to the Director or Administrator within sixty (60) calendar days after completion of the well. Such submission shall not be considered a modification of the permit.

Probably need earlier

III.S. Remediation Workplan System Closure The Permittees shall submit to the Director or Administrator a closure plan for the approved Remediation Workplan system in effect under the permit, at least 90 calendar days before closure is anticipated. The Permittees shall submit a closure plan as a permit modification request in accordance with 40 CFR 270.42. The closure plan should include detailed procedures and a schedule for the disposal or decontamination of all elements of these systems.

III.T. Remediation Workplan System Program Cost Estimate

III.T.1. Within 30 calendar days of the Director or Administrator's approval of the Remediation Workplan system, the Permittees shall prepare a detailed estimate of the capital, operating, and monitoring costs for the Remediation Workplan system.

III.T.2. Within 30 calendar days of the Director or Administrator's approval of the closure plan for a remediation workplan system, the Permittees shall prepare a detailed estimate of the costs for implementing the closure plan for the Remediation Workplan system.

III.T.3. The Permittees shall annually adjust the cost estimates for inflation within 30 calendar days after each anniversary of the date on which the first cost estimates were prepared under permit conditions III.T.1. and III.T.2., or within 30 days of the publication of the new year's inflation factor if the new year's inflation factor is released after the anniversary date of when the first cost estimates were prepared under permit conditions III.L.1. and III.L.2.

III.T.4. Upon completion of the physical construction of the Remediation Workplan system, the Permittees may adjust the costs to reflect the expenditure up to the

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projected capital costs included in the estimate submitted in accordance with permit condition III.T.1.

III.T.5. The Permittees shall prepare a revised cost estimate for the Remediation Workplan system and for the closure of the Remediation Workplan system within 30 calendar days of an approved modification of the Remediation Workplan system.

III.T.6. The Permittees shall keep a copy of the latest cost estimates made in accordance with permit conditions III.T.1. and III.T.2., and any adjustments made in accordance with permit conditions III.T.3., III.T.4., and III.T.5 in the operating record in accordance with permit condition II.I.

need closure for
III.U. Remediation Workplan System Financial Assurance The Permittees shall establish and maintain financial assurance by one of the forms provided for under 40 CFR 264.143 in the amount of the cost estimates required in accordance with permit condition III.T. The Permittees shall provide the Director or Administrator documentation of this financial assurance within 60 calendar days of the Permittees' submittal of the cost estimates in accordance with permit condition III.T.

III.V. Discovery of Releases or Potential Releases

III.V.1. Reporting Releases: If at any time during the term of this Permit the Permittees discover a release of hazardous waste or hazardous constituents at the facility or the potential of a release from a solid waste management unit regardless of the time of the release which is not identified in the RCRA Facility Assessment and which may pose a threat to human health or the environment, the Permittees shall notify the Agencies in writing of the nature, source, extent, location, and magnitude of such a release within fifteen (15) calendar days of such a discovery.

III.V.2. If, based on the information submitted in III.V.1. above, the Agencies determine that the Permittees have not taken adequate voluntary action or the Permittees have not submitted a Stabilization Workplan in accordance with permit condition III.I., the Administrator or Director may initiate a stabilization workplan submission requirement in accordance with permit condition III.I.

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III.W. Dispute Resolution

III.W.1. In the event the Director or Administrator rejects, in whole or in part, any plan, report, or schedule required by Part III of this permit and doesn't require a permit modification, the following procedure will apply:

a) The Director or Administrator will notify the Permittees in writing of the acceptance, rejection, or proposed modification to, the plan, schedule, report, or submittal. Such notice shall:

i) Identify the problem(s) and, where appropriate, suggest the exact change(s) which need to be made to the plan, schedule, or submittal;

ii) Provide an explanation and supporting documentation or data of why modification is needed; and,

iii) In the event the Director or Administrator proposes a modification, the notice will provide a date by which comments on the proposed modification must be received from the Permittees. Such date will not be less than thirty (30) calendar days from the date of the Permittees' receipt of the notice under permit condition III.W.1.a.

b) If the Director or Administrator receives no written comments on the proposed modification from the Permittees, the modification will become effective ~~five (5) calendar days after the close of the comment period specified under condition III.W.1.a.iii.~~ The Director or Administrator will promptly notify the Permittees that the modification has become effective. *OK*

c) If the Permittees submit written comments on the proposed modification, the Director or Administrator shall make a final determination concerning the modification within thirty (30) calendar days after the end of the comment period, if practicable. The Director or Administrator shall then notify the Permittees in writing of the final decision. Such notification shall:

i) Indicate the effective date of the modification, which shall be no later than fifteen

Is this OK legally?

rejection does not

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(15) calendar days after the date of notification of the final modification decision;

ii) Include an explanation of how comments were considered in developing the final modification; and,

iii) Provide a copy of the final modification.

III.W.2. Modifications initiated and finalized by the Director or Administrator using the procedure specified in permit condition III.W.1. do not require permit modification and are not subject to administrative appeal.

III.X. Off-site Access

III.X.1. To the extent that work required by this permit must be done on property not owned or controlled by the Permittees, the Permittees shall use its best efforts to obtain site access agreements from the present owner(s) of such property. "Best efforts" shall mean, at a minimum, a certified letter from the Permittees to the relevant property owner(s) stating the need and purpose for site access and requesting access to such property by the Permittees, EPA, and EPA's authorized representatives. Also, if a reply is received from the property owner(s), the Permittees shall send follow-up letters as appropriate to clarify the work contemplated and address the owner's reasonable concerns. The Agency may assist the Permittees in obtaining such agreements.

*good faith
compensation*

III.Y. Other Permits And/Or Approvals

To the extent that work required by this permit must be done under a permit(s) and/or approval(s) pursuant to other Federal, State, or local regulatory authorities, the Permittees shall use its best efforts to obtain such permits. For the purposes of this permit condition "best efforts" shall mean submittal of a complete application for the permit(s) and/or approval(s) at the earliest opportunity after the information necessary to prepare the application is available to the Permittees.

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TABLE III-1: CORRECTIVE ACTION COMPLIANCE SCHEDULE

Permit Condition	Due Date*
II.I.2. Biennial Report	March 1 of each even year
<u>Track One-Line Oil Spill</u>	
III.A.1. Draft RFI Workplan	45 days after permit effective date
III.A.1. Final RFI Workplan	Provided in writing by the Administrator or Director
III.A.2. Draft RFI Report	120 days from sampling of monitoring wells in accordance with schedule approved under permit condition III.A.1.
III.A.2. Final RFI Report	Provided in writing by the Director or Administrator
III.A.3. Additional Investigation (if needed)	Provided in writing by the Director or Administrator
III.A.4. Draft Remediation Workplan	60 days after approval of RFI Report in accordance with permit condition III.A.2.
III.A.4. Final Remediation Workplan	Provided in writing by the Director or Administrator
<u>Track Two: Non-TSD SWMUs and AOCs</u>	
III.B.1. Draft RFI Workplan	90 days after permit effective date
III.B.1. Final RFI Workplan	Provided in writing by the Administrator or Director
III.B.2. Draft RFI Report	120 days from investigation sampling in accordance with workplan schedule approved in

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accordance with permit
condition III.B.1.

III.B.2. Final RFI Report

Provided in writing by the
Director or Administrator

III.B.3. Additional Investigation
(if needed)

Provided in writing by the
Director or Administrator

III.B.4. Draft Remediation Workplan

60 days after approval of RFI
Report in accordance with
permit condition III.B.2.

III.B.4. Final Remediation Workplan

Provided in writing by the
Director or Administrator

Track Three: TSD SWMUs and AOCs

III.C.1. Draft Interim Measures Report

45 days prior to planned
closure of interim measures
system

III.C.2. Final Interim Measures Report

Provided in writing by the
Director or Administrator

III.D. Final Pre-Permit RFI Report

60 days from permit effective
date

III.E.1. New Well

60 days from permit effective
date

III.E.4. Draft New RFI Workplan

120 days after permit
effective date

III.E.4. Final New RFI Workplan

Provided in writing by the
Administrator or Director

III.E.5. Draft New RFI Report

120 days from investigation
sampling in accordance with
RFI schedule approved in
accordance with permit
condition III.F.1.

III.E.5. Final New RFI Report

Provided in writing by the
Director or Administrator

III.E.6. Additional Investigation
(if needed)

Provided in writing by the
Director or Administrator

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III.F. Draft Remediation Workplan

60 days after approval of RFI Report in accordance with permit condition III.E.5.

III.F. Final Remediation Workplan

Provided in writing by the Director or Administrator

General Corrective Action Requirements

III.H. RFI and Remediation Progress Reports

180 days from permit effective date and semi-annually thereafter through submission of the final RFI report.

III.I.1. Draft Stabilization Action Justification or Workplan

Provided in writing by the Director or Administrator

III.I.2. Final Stabilization Workplan or Justification

Provided in writing by the Director or Administrator.

TABLE III-1: CORRECTIVE ACTION COMPLIANCE SCHEDULE (continued)

<u>Item No.</u>	<u>Permit Condition</u>	<u>Due Date*</u>
<u>III.J.1.</u>	Draft Pre-Remediation Monitoring Workplan	30 days after permit effective date.
<u>III.J.2.</u>	Final Pre-Remediation Monitoring Workplan	Provided in writing by the Director or Administrator.
<u>III.S.</u>	Closure Plan for Remediation System	At least 90 days before closure is anticipated

*All references to days are to calendar days.

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TABLE III-2: PRE-REMEDIATION MONITORING PROGRAM

<u>Well</u>	<u>Water Quality Monitoring Frequency</u>	<u>Water Level Elevation Measurement Frequency**</u>
CP-103A	Quarterly	Monthly 12 mos./Quarterly
CP-103B	Quarterly*	Monthly 6 mos./Quarterly
CP104A	Quarterly	Monthly 12 mos./Quarterly
CP-104B	Quarterly*	Monthly 6 mos./Quarterly
CP-105A	Quarterly	Monthly 12 mos./Quarterly
CP-105B	Quarterly*	Monthly 6 mos./Quarterly
CP-106	Quarterly	Monthly 12 mos./Quarterly
CP-106B	Quarterly*	Monthly 6 mos./Quarterly
CP-107A	Quarterly	Monthly 12 mos./Quarterly
CP-107B	Quarterly*	Monthly 6 mos./Quarterly
CP-108A	Quarterly	Monthly 12 mos./Quarterly
CP-108B	Quarterly*	Monthly 6 mos./Quarterly
CP-109	Quarterly	Monthly 12 mos./Quarterly
CP-110	Quarterly	Monthly 12 mos./Quarterly
W-10	Quarterly	Monthly 12 mos./Quarterly
CP-111	Quarterly	Monthly 12 mos./Quarterly
CP-112	Quarterly	Monthly 12 mos./Quarterly
CP-113	Quarterly	Monthly 12 mos./Quarterly
CP-114	Quarterly	Monthly 12 mos./Quarterly
CP-115	Quarterly	Monthly 12 mos./Quarterly
CP-115B	Quarterly*	Monthly 6 mos./Quarterly
CP-116	Quarterly	Monthly 12 mos./Quarterly
CP-117	Quarterly	Monthly 12 mos./Quarterly
CP-118	Quarterly	Monthly 12 mos./Quarterly
CP-119	Quarterly	Monthly 12 mos./Quarterly
CP-120	Quarterly	Monthly 12 mos./Quarterly
CP-122B	Quarterly*	Monthly 6 mos./Quarterly
MW-2***	Quarterly	Monthly 12 mos./Quarterly

*Monitoring frequency may be adjusted to semi-annually based on the determination in accordance with permit condition III.E.3.

**Monthly 12/6 mos./Quarterly = monthly for the first 12 (or 6) months of pre-corrective action monitoring and quarterly thereafter.

***MW-2 or an approved substitute well

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TABLE III-3: REMEDIATION MONITORING PROGRAM

<u>Well</u>	<u>Water Quality Monitoring Frequency</u>	<u>Water Level Elevation Measurement Frequency</u>
CP-103A	Quarterly	Quarterly
CP-103B	Quarterly**	Quarterly
CP104A	Quarterly	Quarterly
CP-104B	Quarterly**	Quarterly
CP-105	Quarterly	Quarterly
CP-106	Quarterly	Quarterly
CP-106B	Quarterly**	Quarterly
CP-107A	Quarterly	Quarterly
CP-107B	Quarterly**	Quarterly
CP-108	Quarterly	Quarterly
CP-108B	Quarterly**	Quarterly
CP-109	Quarterly	Quarterly
CP-110	Quarterly	Quarterly
W-10	Quarterly	Quarterly
CP-111	Quarterly	Quarterly
CP-112	Quarterly	Quarterly
CP-113	Quarterly	Quarterly
CP-114	Quarterly	Quarterly
CP-115	Quarterly	Quarterly
CP-115B	Quarterly**	Quarterly
CP-116	Quarterly	Quarterly
CP-117	Quarterly	Quarterly
CP-118	Quarterly	Quarterly
CP-119	Quarterly	Quarterly
CP-120	Quarterly	Quarterly
CP-122B	Quarterly**	Quarterly
MW-2*	Quarterly	Quarterly

*MW-2 or an approved substitute well

**Monitoring frequency may be adjusted to semi-annually based on the determination made in accordance with permit condition III.E.3.

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TABLE III-4: GROUNDWATER CLEAN-UP GOALS

<u>Parameter</u>	<u>Standard mg/l</u>	<u>Basis for Standard</u>
Acetone	3.5	e
Chloroform	0.006	e
Chloroethane		
Methylene chloride	0.005	MCL
1,2-Dichloroethane	0.005	MCL
1,1-Dichloroethane	3.5	e
1,1-Dichloroethene	0.007	MCL
1,2-Dichloroethene	0.005	PQL
1,1,1-Trichloroethane	0.2	MCL
1,1,2-Trichloroethane	0.005	MCL
Trichloroethene	0.005	MCL
Tetrachloroethene	0.005	MCL
Vinyl chloride	0.002	MCL
Total Phenol	21.0	MCL
4-methylphenol	0.18	e
Methyl ethyl ketone	2.0	e
Methyl isobutyl ketone	2.0	e
Benzene	0.005	MCL
Ethylbenzene	0.7	MCL
Toluene	1.0	MCL
Xylenes (total)	10.0	MCL
Total Phenol	21.0	MCL
4-methylphenol	0.18	e

*probably should
use MCL instead
B*

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Bis(2-ethylhexyl)phthalate	0.006	MCL
Napthalene	0.7	@
2-methylnapthalene		
Acenaphthene	2.1	@
Fluorene	1.4	@
Phenanthrene		
Pyrene	10.5	@
Benzo(a)anthracene	0.05	@
Chrysene	0.0002	Proposed MCL
Benzo(b)fluoranthene	0.048	@
Benzo(k)fluoranthene	0.5	@
Benzo(a)pyrene	0.2	@
Indeno(1,2,3-cd)pyrene	0.05	@
Arsenic	0.05	MCL
Cadmium	0.005	MCL
Copper	1.3	@
Chromium	0.1	MCL
Cyanide	0.2	MCL
Lead	0.015	MCL
Mercury	0.002	MCL
Nickel	0.1	MCL
Zinc	10.5	@
PCB's	0.0005	MCL

@ Action level in July 27, 1990 Proposed Rule
for Corrective Action for Solid Waste Management

Updated?
P

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Units at Hazardous Waste Management Facilities

MCL	Maximum Contaminant Level
PQL	Practical Quantitation Limit

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Units at Hazardous Waste Management Facilities

MCL	Maximum Contaminant Level
PQL	Practical Quantitation Limit